

# FH-411R

## SERVICE MANUAL

*AEP Model  
E Model  
Australian Model*



● FH-411R is composed of following models. As for the service manual it is issued for each component model, then please refer to it.



### COMPONENT MODEL NAME FOR FH-411R

TUNER, DECK, AMPLIFIER	HST-H411
SPEAKER	SS-H311

### SPECIFICATIONS

<b>Power requirements</b>	AEP, G, IT, EE model : 220V AC, 50/60Hz E, EA, AUS model : 110-120V or 220-240V AC adjustable 50/60Hz
<b>Power consumption</b>	65watts
<b>Dimensions</b>	Approx. 595×270×250mm (w/h/d) (23½×10¾×10 inches) incl. projecting parts and controls.
<b>Weight</b>	Approx. 9.5kg (20 lb 15 oz) net
<b>Supplied accessories</b>	RM-S190 Remote commander (1) SONY SUM-3 (NS) batteries (2) AM loop antenna (1)

Design and specifications subject to change without notice.

Note: The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.



### PARTS LIST

#### NOTE:

- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

G	: Germany model	EE	: East European model
IT	: Italian model	AUS	: Australian model
EA	: Saudi Arabia model		

#### ACCESSORY & PACKING MATERIAL

1-465-249-11	REMOTE COMMANDER(RM-S190)
2-181-754-01	COVER, BATTERY(for RM-S190)
1-501-349-11	ANTENNA, LOOP
 1-569-007-11	(E).....ADAPTOR, CONVERSION 2P
 1-569-008-11	(AUS, EA).....ADAPTOR, CONVERSION 2P
3-752-778-11	(AEP, E, EA, AUS).....MANUAL INSTRUCTION (English, French, Spanish, Chinese)
3-752-778-41	(AEP, G, IT).....MANUAL INSTRUCTION (German, Dutch, Swedish, Italian, Portuguese)
3-752-778-51	(EE).....MANUAL INSTRUCTION (English, German, Polish, Russian)
* 4-942-341-01	(E, EA).....INDIVIDUAL CARTON
* 4-942-344-01	(AEP, G, IT, EE, AUS)...INDIVIDUAL CARTON
* 4-942-340-01	CUSHION(HST)
* 4-857-137-01	CUSHION(SPEAKER)

**COMPACT HI-DENSITY  
COMPONENT SYSTEM**  
**SONY®**

English  
91A1860-1  
Printed in Japan  
©1991. 1

# HST-H411

## SERVICE MANUAL

*AEP Model  
E Model  
Saudi Arabia Model  
Australian Model*

This set is the tuner, deck and amplifier section in FH-411R.



### SPECIFICATIONS

#### Tuner Section

System	FM stereo, FM/AM superheterodyne tuner
FM tuner section	
Tuning range	87.5 – 108 MHz (except East European model) 65.0 – 74.0 MHz (East European model)
Antenna	Telescopic antenna
Antenna terminals	75 ohms unbalanced
Intermediate frequency	10.7 MHz
AM tuner section	
Intermediate frequency	450 kHz

#### MW/LW tuner section (for the European model)

	MW	LW
Tuning range	531 – 1,602 kHz	153 – 281 kHz
Antenna	AM loop antenna External antenna terminals	

#### LW/MW/SW tuner section (for the model for other countries)

	LW	MW	SW
Tuning range	153 – 281 kHz	531 – 1,602 kHz	5.95 – 17.9 MHz
Antenna	AM loop antenna External antenna terminals		

#### Amplifier Section

Continuous RMS power output	European model: 20 + 20 watts (6 ohms, at 1 kHz, 5% THD) Other models: 20 + 20 watts (6 ohms, at 1 kHz, 5% THD)
Peak music power output (for the models other than Europe)	200 watts (6 ohms)

#### Inputs

	Sensitivity	Impedance
CD (phono jacks)	450 mV	50 kilohms
MIC (minijack)	1 mV	600 ohms
AUX (phono jacks)	450 mV	50 kilohms

#### Outputs

HEADPHONES (stereo minijack)	Accepts headphones of 8 ohms or more.
SPEAKER	Accepts speakers of 6 to 16 ohms.

#### Model Name Using Similar Mechanism

HST-404

#### Tape Transport Mechanism Type

DECK A: TCM-YM47CW-70M  
DECK B: TCM-YM47CW-71M

#### Cassette Deck Section

Recording system	4-track 2-channel stereo
Frequency response (DOLBY NR OFF)	60 – 13,000 Hz ( $\pm 3$ dB), using TYPE I cassette (Sony HF-S) 60 – 14,000 Hz ( $\pm 3$ dB), using TYPE II cassette
Wow and flutter	0.1% WRMS $\pm 0.3$ % (DIN)

#### Speaker Section

Speaker system	2 way 2 speaker system
Speaker units	Woofer: 14 cm dia., cone type Tweeter: 5 cm dia., cone type
Enclosure type	Bass reflex
Frequency range	70 Hz – 20 kHz
Sensitivity	88 dB/W/m
Impedance	6 ohms
Dimensions	Approx. 185 x 270 x 220 mm (w/h/d) (7 1/4 x 10 5/8 x 8 3/4 inches)
Weight	Approx. 2.7 kg (6 lb) net per speaker

— Continued on page 2 —

**STEREO CASSETTE  
DECK RECEIVER**

**SONY®**



## General

Power requirements	European model: 220 V AC, 50/60 Hz Model for other countries: 110 – 120 V or 220 – 240 V AC adjustable, 50/60 Hz
Power consumption	European model: 65 watts Model for other countries: 65 watts
Dimensions	Approx. 595 x 270 x 250 mm (w/h/d) (23 1/2 x 10 3/4 x 10 inches) incl. projecting parts and controls
Weight	Approx. 9.5 kg (20 lb 15 oz) net
Supplied accessories	RM-S190 Remote Commander (1) SONY SUM-3 (NS) batteries (2) AM loop antenna (1)

Design and specifications subject to change without notice.

### Note

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

## Overview

### Tuner section

- Consult the below chart for the band stations receivable for the model available in your country.

European model	LW/MW/FM
Model for other countries	LW/MW/SW/FM

- You can store up to 25 stations in the memory.

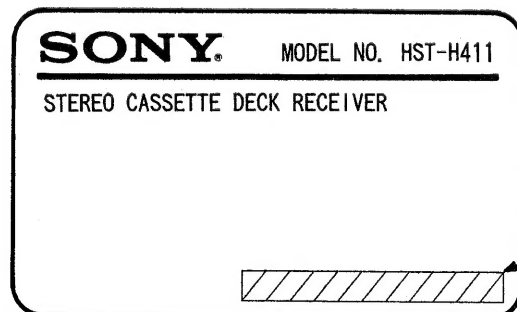
### Amplifier section

- DBFB (Dynamic Bass Feedback) system of the European models, or SAT (Super Acoustic Turbo) system of the model for other countries reinforces bass sound.
- 5-band stereo graphic equalizer adjusts the sound quality to your preference during playback.

### Cassette deck section

- Double decks allow you to:
  - dub tapes.
  - play back one deck then the other successively.


— MODEL IDENTIFICATION —  
(Specification Label)





- 4-942-612-01: E/ Australian model
- 4-942-612-11: Saudi Arabia model
- 4-942-613-01 } : AEP model
- 4-942-613-11 }
- 4-942-614-01: East European model
- 4-942-615-01: Germany model
- 4-942-616-01: Italian model

## TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
SECTION 1 GENERAL .....	3
SECTION 2 DISASSEMBLY .....	6
SECTION 3 MECHANICAL ADJUSTMENT .....	6
SECTION 4 ELECTRICAL ADJUSTMENT .....	7
SECTION 5 DIAGRAMS	
5-1. Semiconductor Lead Layouts .....	10
5-2. Circuit Boards Location .....	10
5-3. Printed Wiring Boards .....	11
5-4. Schematic diagram	
— Deck AMP Section — .....	15
IC Block diagrams .....	17
5-5. Schematic diagram	
— Tuner Section — .....	19
SECTION 6 EXPLODED VIEWS .....	23
SECTION 7 ELECTRICAL PARTS LIST .....	27

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

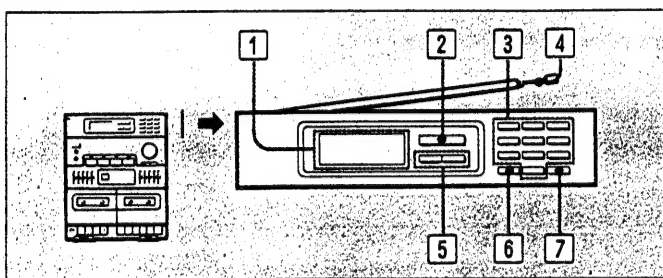
### SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

## SECTION 1 GENERAL

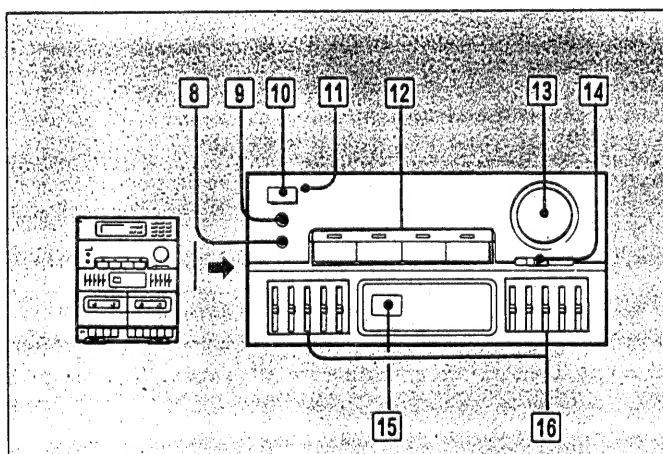
This section is extracted  
from instruction manual.

### Parts Identification



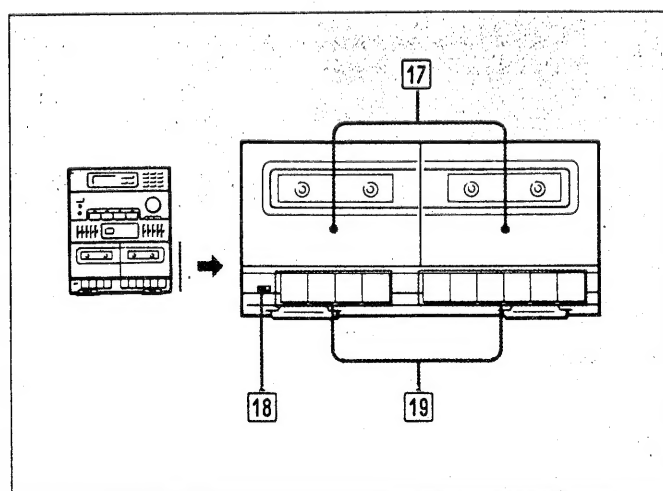
#### Tuner Section

- 1 Display window
- 2 BAND selector
- 3 PRESET STATION buttons
- 4 Telescopic antenna
- 5 TUNING +/- buttons
- 6 MEMORY button
- 7 ENTER button



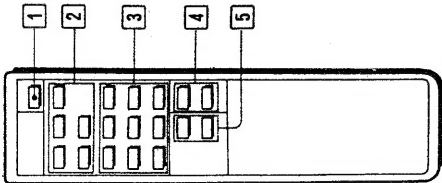
#### Amplifier Section

- 8 HEADPHONES jack (stereo minijack)
- 9 MIX MIC (microphone) jack (minijack)
- 10 POWER switch
- 11 STANDBY indicator  
It is lit as long as the AC power cord is connected to a wall outlet.
- 12 Function selectors
- 13 VOLUME control
- 14 BALANCE control
- 15 REMOTE SENSOR
- 16 5-band stereo graphic equalizer



#### Cassette Deck Section

- 17 Cassette holder
- 18 DOLBY NR switch
- 19 Tape operation buttons
  - ▶ : PLAY (playback) button
  - ◀◀ : REW (rewind) button
  - ▶▶ : FF (fast forward) button
  - ▲ : STOP/EJECT button
  - : REC (record) button and indicator
  - || : PAUSE button



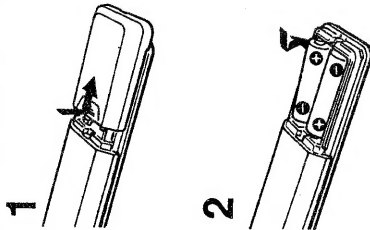
1	POWER switch
2	Function select buttons
3	CD player operation buttons
4	VOL (volume) +/- buttons
5	TUNER PRESET +/- buttons

1	Interrupteur d'alimentation (POWER)
2	Touches de sélection de fonction
3	Touches d'exploitation du lecteur CD
4	Touches de volume (VOL +/-)
5	Touches de stations préétablies (TUNER PRESET +/-)

1	Interruptor de alimentación (POWER)
2	Tecias selectoras de función
3	Tecias de operación del reproductor de discos compactos
4	Tecias de volumen (VOL +/-)
5	Tecias de sintonía memorizada (TUNER PRESET +/-)

1	電源開關[POWER]
2	功能選擇按鈕
3	雷射唱碟操作按鈕[CD]
4	音量按鈕[VOL +/-]
5	調諧預置鍵[TUNER PRESET +/-]

Battery installation/Mise en place des piles/Instalación de las pilas/電池裝法



<p><b>Before operation</b>, install two R6 (size AA) batteries.</p> <p><b>Battery life</b> About half a year of normal operation can be expected when using the Sony SUM-3 (NS) batteries. When the batteries are exhausted, the remote commander cannot operate the stereo system. Replace both batteries with new ones.</p> <p><b>To avoid battery leakage</b> When the commander is not to be used for a long period of time, remove the batteries to avoid damage caused by battery leakage and corrosion.</p> <p>Avant d'utiliser la télécommande, mettre deux piles R6 (format AA).</p> <p><b>Autonomie des piles</b> Des piles Sony SUM-3 (NS) assurent environ six mois d'autonomie dans le cadre d'une utilisation normale. Lorsque les piles sont épuisées, la télécommande ne peut plus être utilisée, la chaîne stéréo. Remplacer les deux piles par des neuves.</p> <p><b>Pour éviter une fuite des piles</b> Si la télécommande ne doit pas être utilisée pendant longtemps, enlever les piles pour éviter tout dommage dû à une fuite d'électrolyte et à la corrosion.</p>	<p>Antes de la operación, instale dos pilas R6 (tamaño AA).</p> <p><b>Duración de las pilas</b> Empleando pilas SUM-3 (NS) Sony, podrá esperar medio año de operación normal. Cuando las pilas se agotan, el telemando no podrá controlar el sistema estereo. Reemplace ambas pilas por otras nuevas.</p> <p><b>Para evitar la fuga del electrolito</b> Cuando no vaya a emplear el telemando durante mucho tiempo, extraiga las pilas a fin de evitar el daño que podría causar el electrolito de las mismas.</p> <p>操作遙控器以前，請先裝入2個R6號(AA)尺寸電池</p> <p><b>電池壽命</b> SONY SUM-3 (NS) 電池可使用約達半年之久(在正常操作狀態下)。 電池電力耗盡，遙控器便失去遙控功能。因此情形請更換新電池。</p> <p><b>電池液洩漏之防止</b> 若長期不使用遙控器，請取出電池，以免電池液洩漏損壞及腐蝕。</p>
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Precautions

On operating voltage

Before operating the stereo system, check that the operating voltage of your system is identical with the voltage of your local power supply.

European model	220V, 50/60 Hz
Model for other countries	110 - 120, 220 - 240 V AC adjustable, 50/60 Hz

On safety

- The unit is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the unit itself has been turned off.
- Unplug the system from the wall outlet if it is not to be used for an extended period of time. To disconnect the cord, pull it out by the plug. Never pull the cord itself.
- Should any solid object or liquid fall into the component, unplug the system and have the component checked by qualified personnel before operating it any further.
- The nameplate indicating operating voltage, etc. is located at the rear of the amplifier.
- AC power cord must be changed only at the qualified service shop.

If you have any question or problem concerning your stereo system, please consult your nearest Sony Dealer.

Preparations

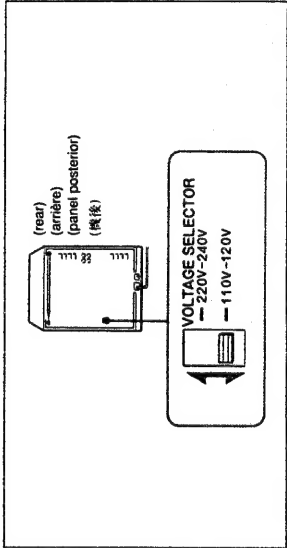
← See illustration on the left.

Adjusting the operating voltage

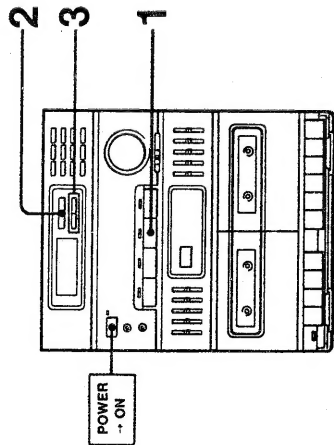
This unit operates on either 110 - 120 or 220 - 240 V AC. Before connecting the AC power cord to a wall outlet, check that the voltage selector at the rear is set to the local power line voltage. If not, reset the selector as shown.

Installation

Place the stereo system in a location with adequate ventilation to prevent internal heat build-up in the system.



## Tuning in Manually Sintonisation manuelle 手動調諧



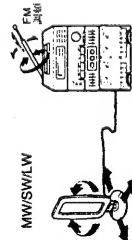
1

2 Select band.  
Choisir la gamme.  
Elija la banda.  
選擇波段

3 Select station.  
Choisir la station.  
Elija la emisora.  
選擇電台

Antenna adjustment  
Réglage de l'antenne  
Ajuste de la antena  
天線之調整

Find the best location  
Trouver la meilleure localisation  
Busque la mejor orientación.  
請調節在接收狀態最好之處。



## Radio

See the illustrations on the left for operation.

Indication on the display  
TUNED: Appears when a station of sufficient signal strength is tuned in.  
STEREO: Appears when an FM stereo program of sufficient signal strength is received.

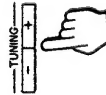
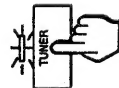
### Changing the MW Tuning Interval

The MW tuning interval is preset at the factory to 9 kHz.  
If you use a system where the frequency allocation system is different from the preset interval, change the interval as follows.

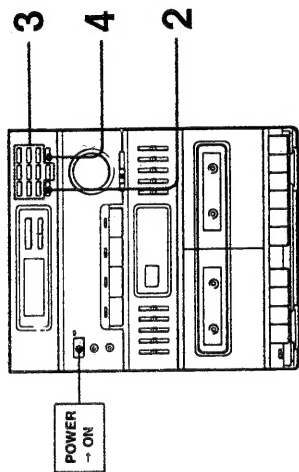
- 1 Turn on the power.
- 2 Tune in any MW station.
- 3 Pull out the plug.
- 4 Plug in the unit again while pressing the TUNING + button.

To reset the interval, follow the same procedure.

Important  
When the interval is changed, stored stations will be erased from the memory.



## Storing Stations in the Memory Memorisation des stations Memorización de emisoras 如何把電台頻率存入記憶機構

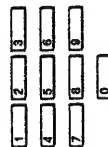


1 Tune in a desired station.  
Sintoniser la station à mémoriser.  
接收一個希望記憶的電台。

2



3 Select a preset station number.  
Choisir un des numéros de station pré-réglés.  
Elija un número de memorización de emisora.  
選擇一個要存入的電台號碼。



4



5 Repeat these steps for each station to be preset.  
Répéter ces démarches pour chacune des stations à mémoriser.  
Repita estos procedimientos para cada una de las emisoras que desee memorizar.  
每一個希望記憶的電台都按照上述步驟進行。

## Radio

See the illustrations on the left for operation.

To Tune in a Preset Station  
1 Select the preset station number.  
2 Press ENTER while the selected number is displayed.

If the MEMORY indication goes off before you press a preset number  
Press MEMORY again, and then enter a preset number.

How many stations can be stored in the memory?  
Up to 25 stations can be stored.

To select a preset station number greater than 10  
(e.g. to select 23)  
Press 2 → 3

When you have pressed a wrong preset number  
Press MEMORY and then press the correct number.

Can a previously stored station be erased?  
No, erasing only is not possible, but storing a new station erases the previously stored one.

Important  
If you leave the unit disconnected from the wall outlet for more than one month, stored stations may be erased from memory. In this case, store the stations again.

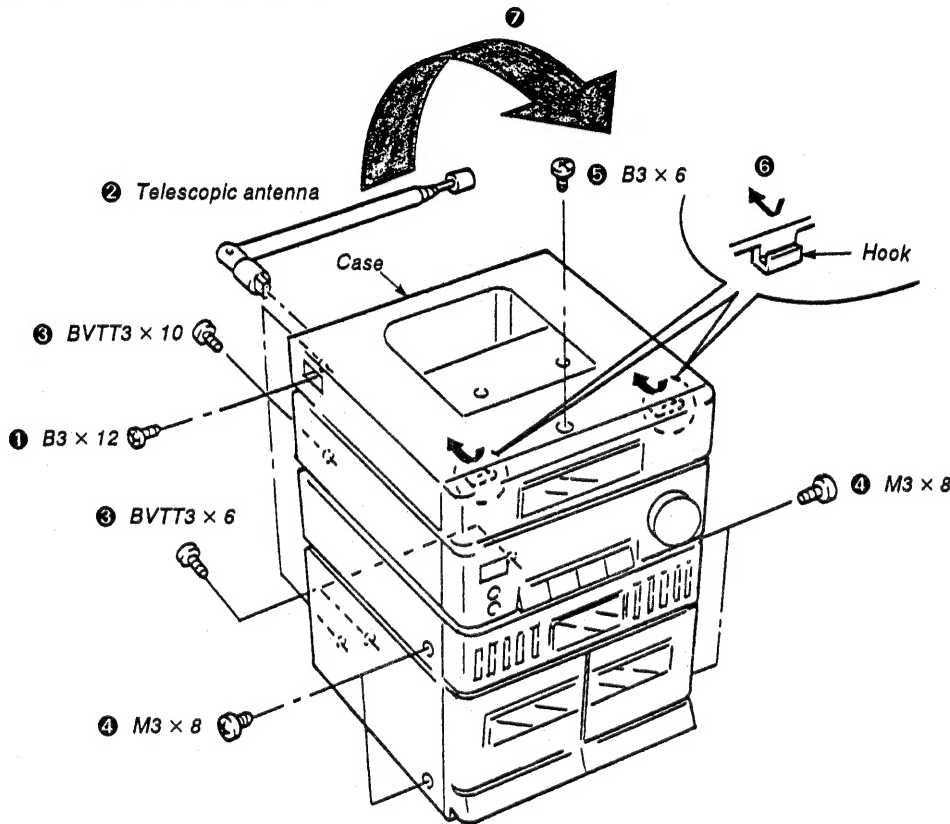
SECTION 2  
DISASSEMBLY

**Note:** Follow the disassembly procedure in the numerical over given.

**2-1. Case Removal**

- 1. Remove the ❶ screw + B 3×12, next similar way the ❷ telescopic antenna.
- 2. Remove the seven screws. (❸ to ❹)
- 3. Press the two hooks ❺ with your fingers to remove the lock, then remove the case by ❻ lifting it upward.

Coution : Be careful not to break off the hooks.



SECTION 3  
MECHANICAL ADJUSTMENT

**PRECAUTION**

- 1. Clean the following parts with a denatured-alcohol-moistened swab:
  - record/playback heads    pinch rollers
  - erase heads                rubber belts
  - capstan                      idlers
- 2. Demagnetize the record/playback head with a head demagnetizer.
- 3. Do not use a magnetized screwdriver for the adjustments.
- 4. After the adjustments, apply suitable locking compound to the parts adjusted.
- 5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

**Torque Measurement**

Torque	Torque ment	Meter reading
FWD	CQ-102C	30-70g·cm (0.42-0.97oz·inch)
FWD Back tension	CQ-102C	1.5-5.5g·cm (0.020-0.076oz·inch)
FF, REW	CQ-201B	63g·cm or more (0.87oz·inch or more)

## SECTION 4

### ELECTRICAL ADJUSTMENT

1. Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
2. Do not use a magnetized screwdriver for the adjustments.
3. After the adjustments, apply suitable locking compound to the parts adjusted.
4. The adjustments should be performed with the rated power supply voltage unless otherwise noted.
5. The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
6. The adjustments should be performed for both L-CH and R-CH.

- Switches and controls should be set as follows unless otherwise specified.

DOLBY NR switch: OFF

GEQ RV: CENTER

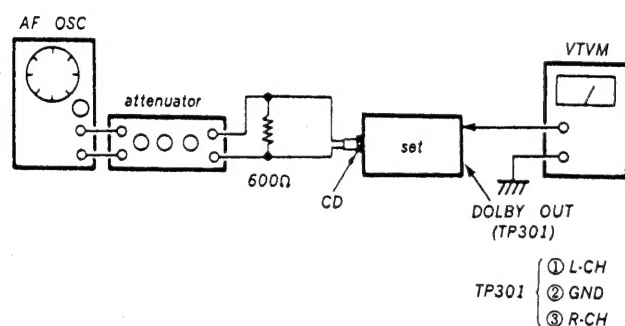
ISS switch: 1

FUNCTION: CD

- Standard Record:

Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

Mode: record



#### Standard Input Level

	CD
source impedance	600Ω
input level	0.46V (-4.6dB)

#### Standard Output Level

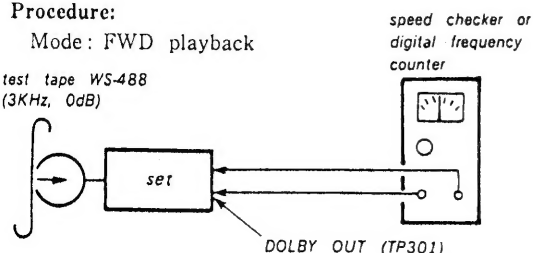
	DOLBY OUT
load impedance	—
output level	0.4V (-5.7dB)

#### Tape Speed check

##### Procedure:

Mode: FWD playback

test tape WS-488  
(3KHz, 0dB)



Specification:

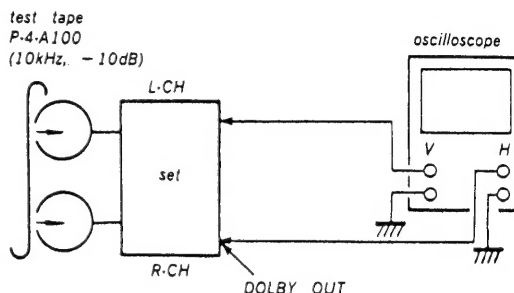
Digital frequency counter
2,920Hz-3,070Hz

#### Record/Playback Head Azimuth Adjustment

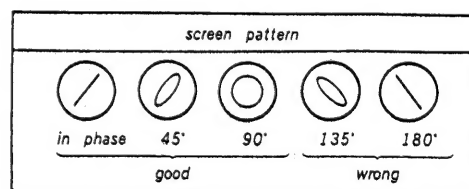
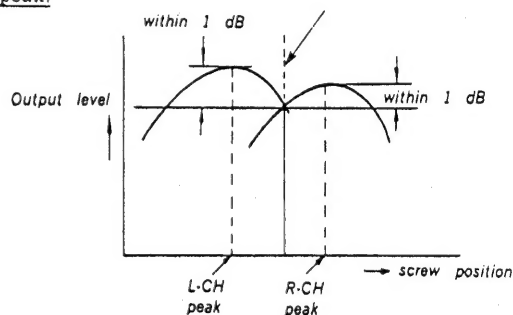
Note: Perform this adjustments for both decks.

##### Procedure:

1. Mode: FWD playback

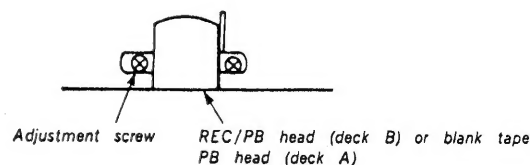


2. Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 1 dB of peak.



3. After the adjustments, apply suitable locking compound to the parts adjusted.

##### Adjustment Location:

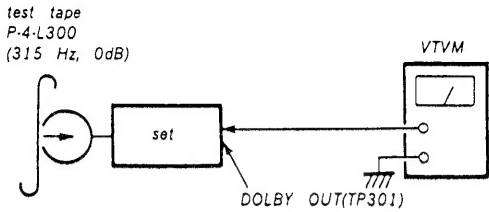




Playback Level Adjustment

Procedure:

Mode: FWD playback



Adjust,

DECK-A side RV321 (L-CH), RV421 (R-CH)

DECK-B side RV331 (L-CH), RV431 (R-CH)

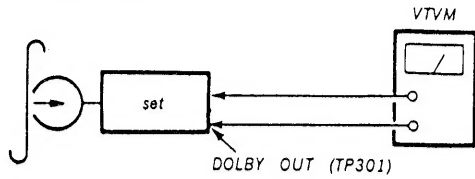
so that the specifications are satisfied.

DOLBY OUT level: 0.38 to 0.42V

(-6.2 to -5.2dB)

level difference between the channels: within 1.0dB

2. Mode: playback



Play back the recorded in step 1. If the specification is not satisfied, adjust RV341 (L-CH), RV441 (R-CH) and repeat steps 1 and 2.

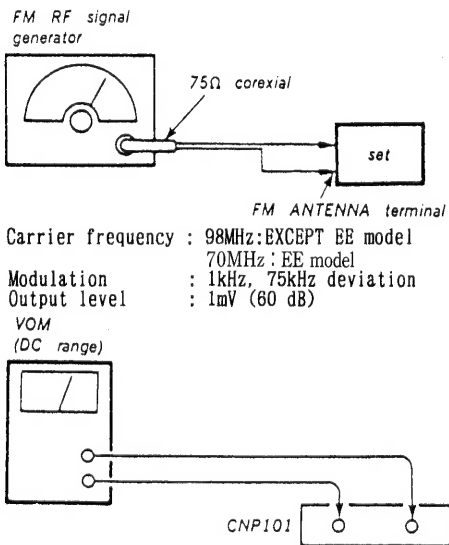
DOLBY OUT level: 0.45 to 0.36V (-4.7 to -6.7dB)

FM SECTION

FM Discriminator Alignment (NULL Check)

Setting:

EE : East European model



Carrier frequency : 98MHz:EXCEPT EE model

70MHz:EE model

Modulation : 1kHz, 75kHz deviation

Output level : 1mV (60 dB)

VOM  
(DC range)

Procedure:

1. Push the TUNING (+, -) button for 98 MHz:EXCEPT EE model or 70 MHz:EE model.
2. Adjust IFT101 for 0V reading on the VOM.

Note: FM tuned indication lighting level adjustment should be made after FM discriminator alignment.

FM Tuned Indication Lighting Level Adjustment

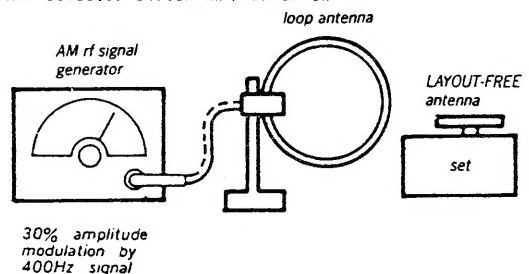
BAND select switch: FM

1. Output 32μV (30 dB), 98 MHz:EXCEPT EE model or 70 MHz:EE model from FM RF signal generator.
2. Adjust RV101 so that the LCD **TUNED** light up.

AM SECTION

Setting:

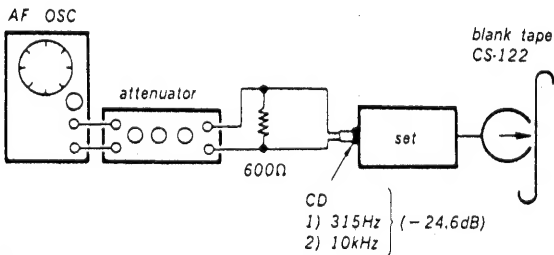
BAND selector switch:MW, LW or SW



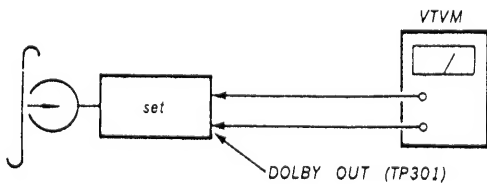
Record BIAS Current Adjustment

Procedure:

1. Mode: record



2. Mode: playback



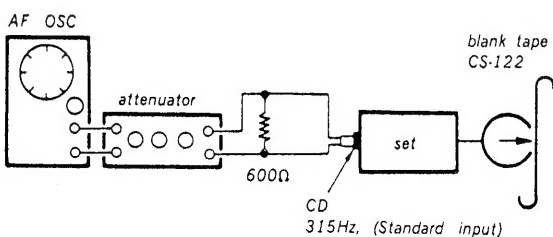
Play back the recorded in step 1. If the specification is not satisfied, adjust RV361 (L-CH), RV461, (R-CH) and repeat steps 1 and 2.

The DOLBY OUT level of 10 kHz signal relative to that of 315 Hz: -1 to 1dB

Record Level Adjustment

Procedure:

1. Mode: record



- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

#### MW Tuned Indication Lighting Level Adjustment

##### BAND select switch: MW

1. Output 0.42mV (52dB), 1,404kHz from AM RF signal generator.
2. Adjust RV102 so that the LCD TUNED light up.

#### LW OSC Voltage Adjustment

##### Procedure:

1. Connect the VOM to D002-2 cathode (VT).
2. Set the BAND selector switch to LW.
3. Push the TUNING (+, -) button for 153kHz(IT:144kHz). Adjust L001 for 0.9 to 1.1V reading on the VOM
4. Push the button for 281kHz(IT:288kHz). Adjust CT001 for 6.8 to 7.2V reading on the VOM.

#### SW OSC Voltage Adjustment (E,Saudi Arabia,Australian model)

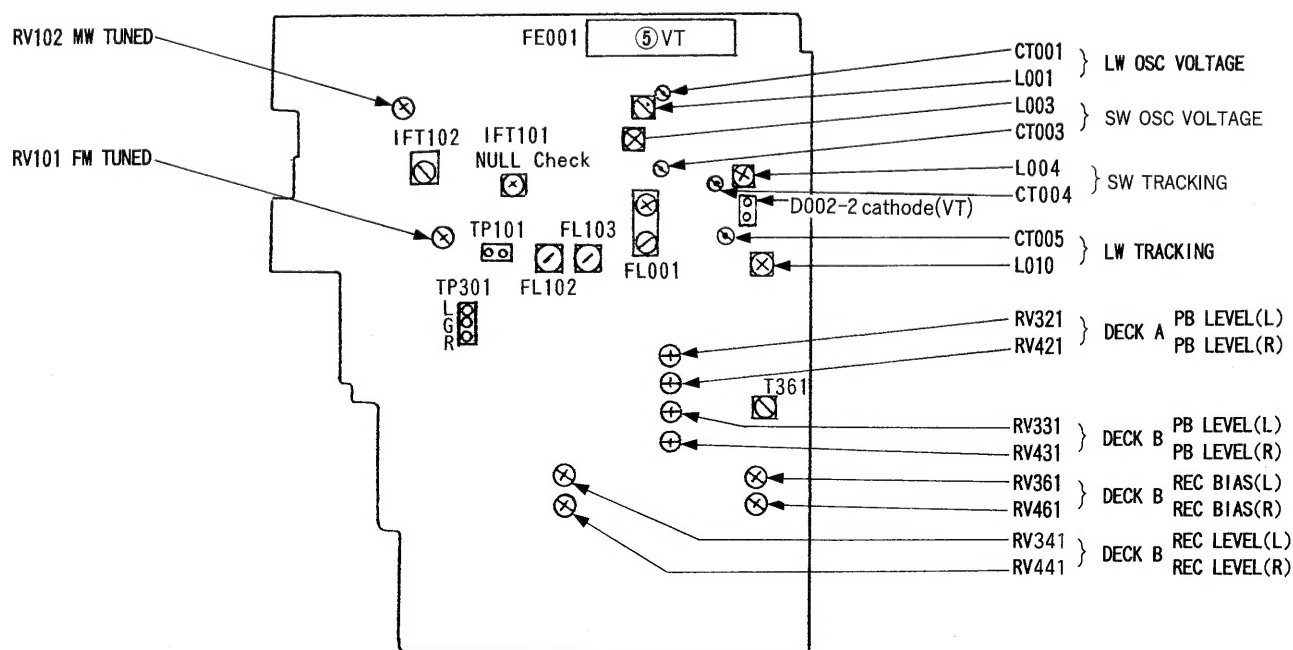
##### Procedure:

1. Connect the VOM to FE001⑤ pin(VT).
2. Set the BAND selector switch to SW.
3. Push the TUNING (+, -) button for 5.95MHz. Adjust L003 for 0.9 to 1.1V reading of the VOM.
4. Push the button for 17.9MHz. Adjust CT003 for 8.3 to 8.7V reading on the VOM.

SW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
17MHz	7MHz
CT004	L004

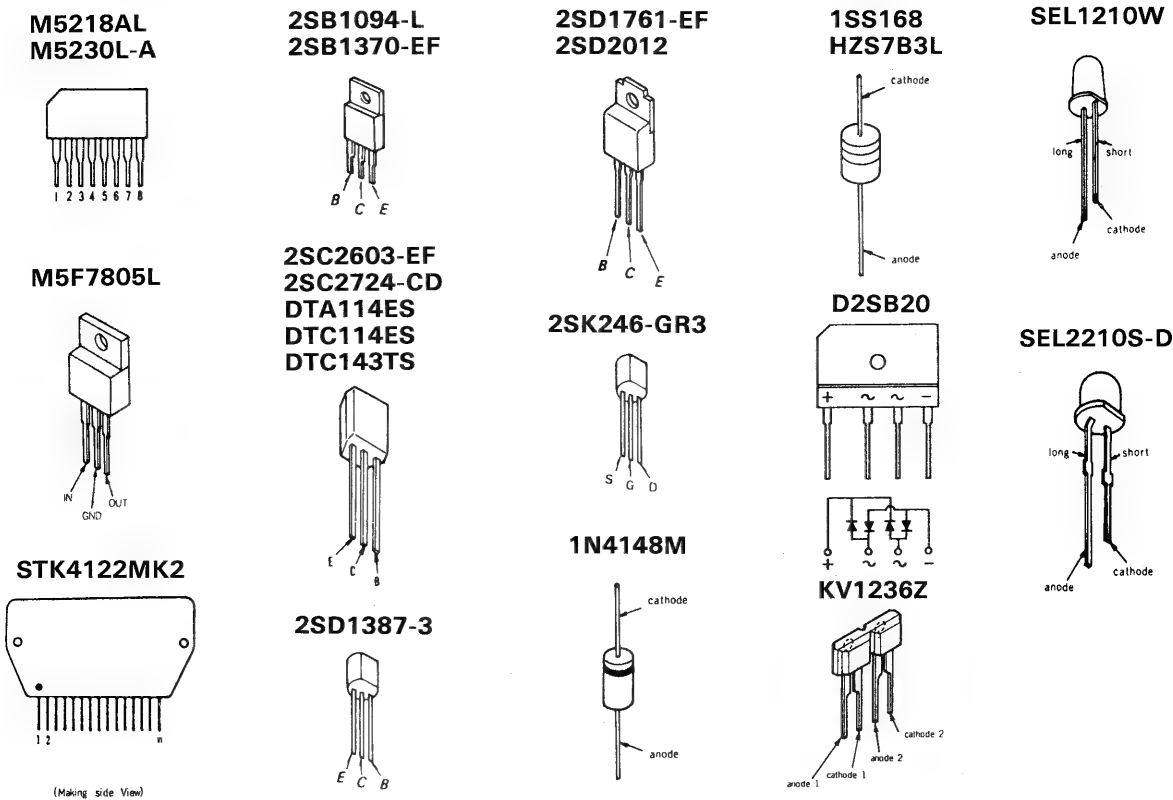
LW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
270kHz	162kHz
CT005	L010

Adjustment Location:main board —Component side—

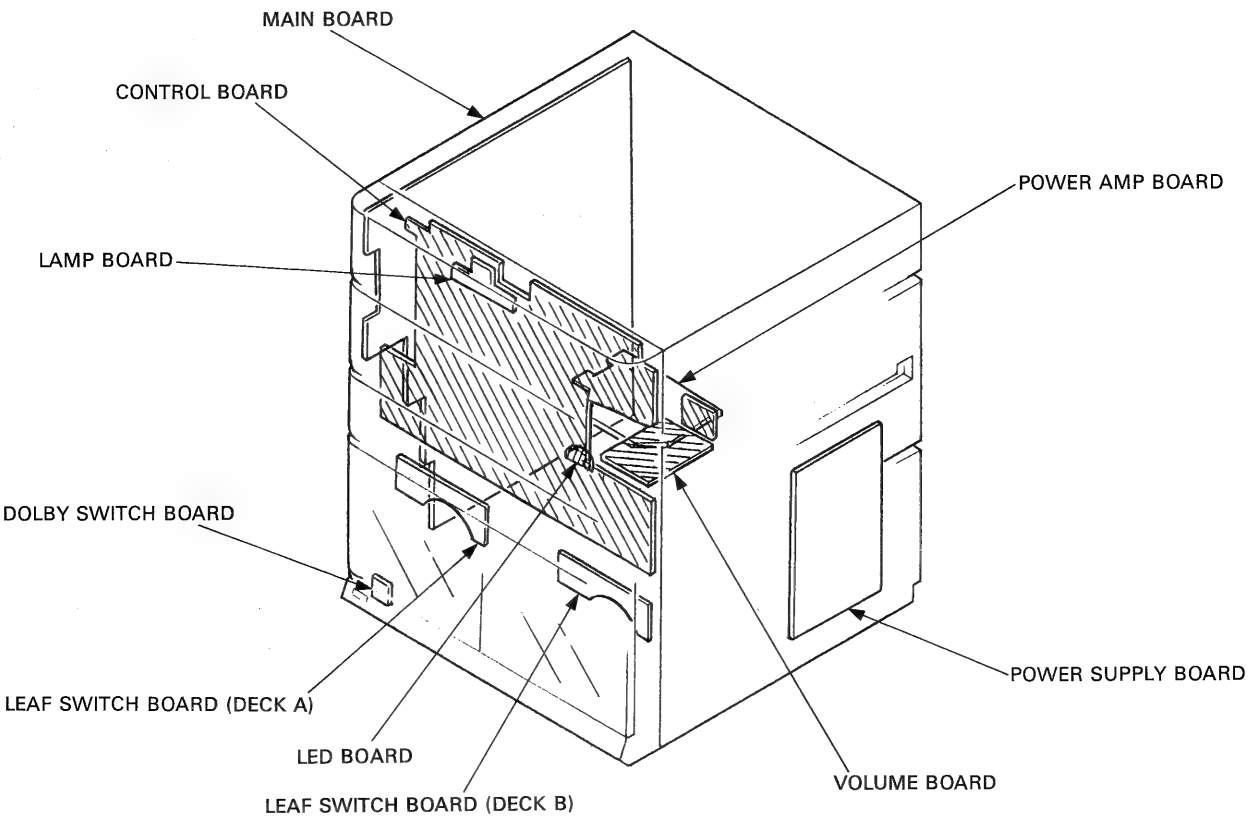


# SECTION 5 DIAGRAMS

## 5-1. SEMICONDUCTOR LEAD LAYOUTS



## 5-2. CIRCUIT BOARDS LOCATION





# 5-3. PRINTED WIRING BOARDS

## Note:

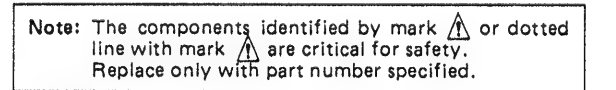
- — : parts extracted from the component side.
- — : parts extracted from the conductor side.
- : parts mounted on the conductor side.
- : parts mounted with part number.
- : indicates side identified with part number.
- : Pattern on the side which is seen.

- AUS : Australian
- EA : Saudi Arabia
- G : Germany
- IT : Italian
- EE : East European

## Semiconductor Location

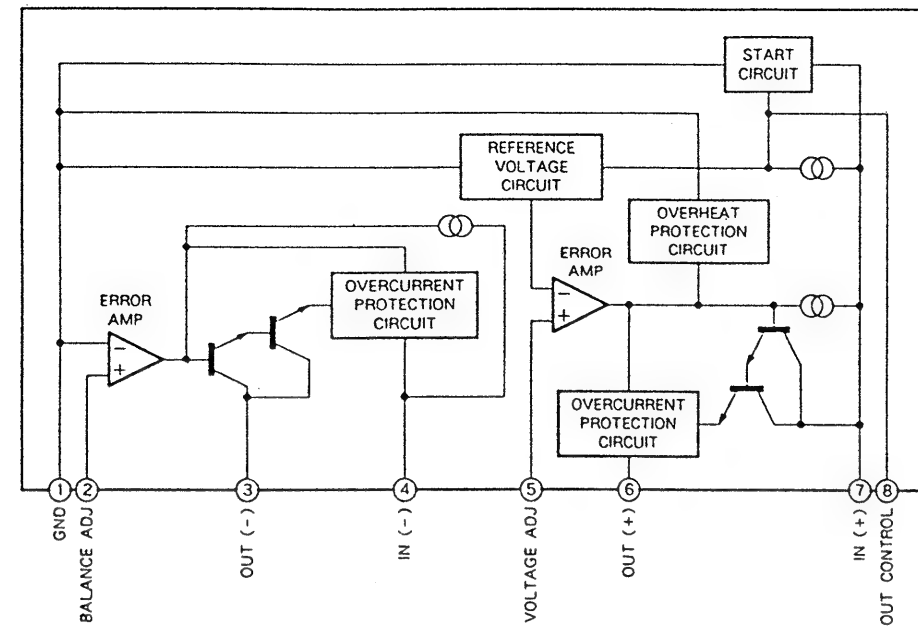
Ref. No.	Location	Ref. No.	Location
D 0 0 1 - 1 (AUS, E, EA)	C - 7	C 3 2 1	F - 7
D 0 0 1 - 2 (AUS, E, EA)	C - 5	C 3 3 1	F - 10
D 0 0 2 - 1	C - 6	C 3 4 1	H - 7
D 0 0 2 - 2	D - 5	C 3 5 1	F - 10
D 0 0 3	D - 4	C 3 6 1	I - 9
D 0 0 4 (AUS, E, EA)	D - 6	C 5 0 1	J - 2 8
D 0 0 5	C - 7	C 5 0 2	I - 2 7
D 0 0 6	C - 7	C 5 1 1	J - 2 8
D 0 1 1 (AUS, E, EA)	C - 5	C 5 1 1	G - 2 5
D 0 1 3 (AUS, E, EA)	C - 5	C 6 0 1	J - 2 5
D 0 1 4 (AUS, E, EA)	D - 7	C 6 5 1	C - 2 6
D 0 1 6	D - 7	C 9 0 1	J - 6
D 0 1 7	H - 2 8	C 9 0 2	I - 9
D 0 1 8	G - 2 7		
D 0 1 9 (AUS, E, EE, EA, IT)	F - 2 7	Q 0 0 1	D - 8
D 0 2 0 4 (AUS, E, EE, EA, IT)	F - 2 7	Q 0 0 2	C - 8
D 2 0 5 (AEP, EE, G)	F - 2 7	Q 0 0 3	B - 9
D 2 0 7	G - 2 7	Q 0 0 4	C - 8
D 2 0 8	G - 2 7	Q 0 0 5	B - 9
D 2 0 9	G - 2 7	Q 0 0 6	C - 8
D 2 1 0	F - 2 7	Q 0 0 7	B - 8
D 2 1 1	F - 2 7	Q 0 0 8 (AUS, E, EA)	C - 8
D 2 1 4 (AEP, EE)	G - 2 7	Q 0 0 9 (AUS, E, EA)	B - 8
D 2 1 5 (AUS, E, EE, EA, IT)	F - 2 7	Q 0 1 0	D - 6
D 2 1 6 (AUS, E, EE, EA)	G - 2 7	Q 0 1 1	E - 7
D 3 0 1	F - 7	Q 0 1 2	D - 7
D 3 0 2	F - 7	Q 0 1 3 (IT, G)	C - 8
D 3 0 3	I - 6	Q 1 0 1	B - 9
D 3 0 4	G - 8	Q 1 0 2	B - 9
D 3 0 5	G - 8	Q 1 0 3	B - 9
D 3 0 6	G - 8	Q 1 0 4	B - 9
D 3 0 7	G - 10	Q 1 0 5	B - 9
D 3 0 8	G - 10	Q 1 0 6	B - 8
D 3 0 9	H - 10	Q 2 0 1	G - 2 9
D 3 1 0	G - 10	Q 3 4 1	F - 9
D 3 1 1	H - 9	Q 3 4 2	G - 9
D 3 1 2	H - 9	Q 3 5 1	H - 7
D 3 1 3	H - 9	Q 3 5 2	H - 6
D 3 1 4	H - 9	Q 3 6 1	F - 5
D 3 1 5	H - 9	Q 3 6 2	F - 5
D 3 1 6	I - 2 8	Q 3 8 1	I - 10
D 3 1 7	I - 2 8	Q 3 8 2	I - 10
D 3 1 8	G - 2 6	Q 3 8 3	I - 8
D 3 1 9	H - 2 9	Q 3 8 4	I - 7
D 3 2 0	H - 2 8	Q 4 4 1	G - 9
D 3 2 1	H - 2 8	Q 4 4 2	G - 9
D 3 2 2	H - 2 6	Q 4 5 1	I - 7
D 3 2 3	G - 30	Q 4 5 2	I - 6
D 3 2 4	J - 2 7	Q 5 0 1	J - 2 7
D 3 2 5	B - 2 3	Q 5 5 1	H - 30
D 3 2 6	I - 6	Q 5 5 2	H - 2 6
D 3 2 7	H - 20	Q 5 5 3	H - 2 6
D 3 2 8	H - 20	Q 5 5 4	H - 2 6
D 3 2 9	D - 9	Q 5 5 5	J - 2 6
D 3 3 0	B - 9	Q 5 5 6	J - 2 6
D 3 3 1	G - 2 8	Q 5 5 7	I - 6
D 3 3 2	F - 6	Q 5 5 8	J - 9
D 3 3 3	F - 7	Q 5 5 9	J - 8



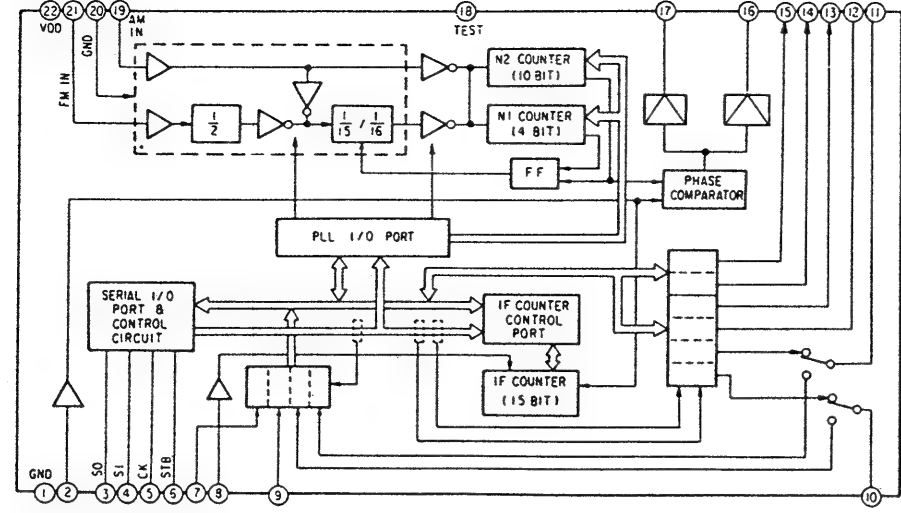


- **B+** : B+ Line
- **B-** : B- Line
- **□** : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.  
no mark: DECK A:PB  
(     ): DECK B NORMAL REC  
<     >: DECK B C, O<sub>2</sub> REC
- Voltages are taken with a VOM (Input Impedance 10MΩ).  
Voltage variations may be noted due to normal production tolerances.
- Signal path,
  - ⇒ : FM     Σ     : PB (DECK A)     ⇔ : CD
  - : PB (DECK B)
  - : REC (DECK B)
- AUS: Australian
  - G: Germany
  - EE: East European
  - IT: Italian
  - EA: Saudi Arabia

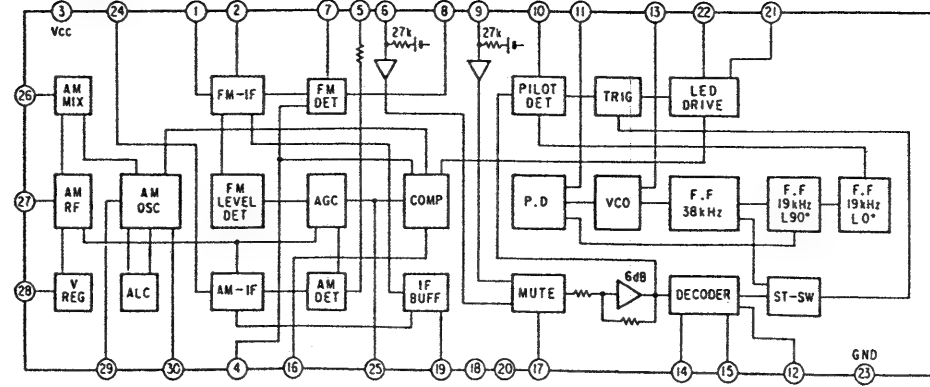
IC 901  
M5230L-A



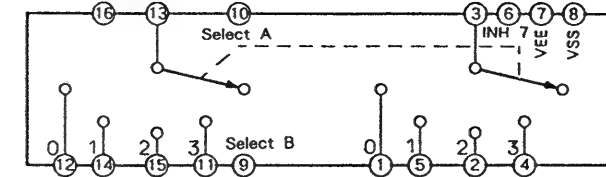
IC 102  
TC9227P



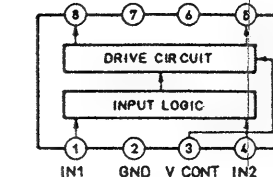
IC 101  
LA1851N



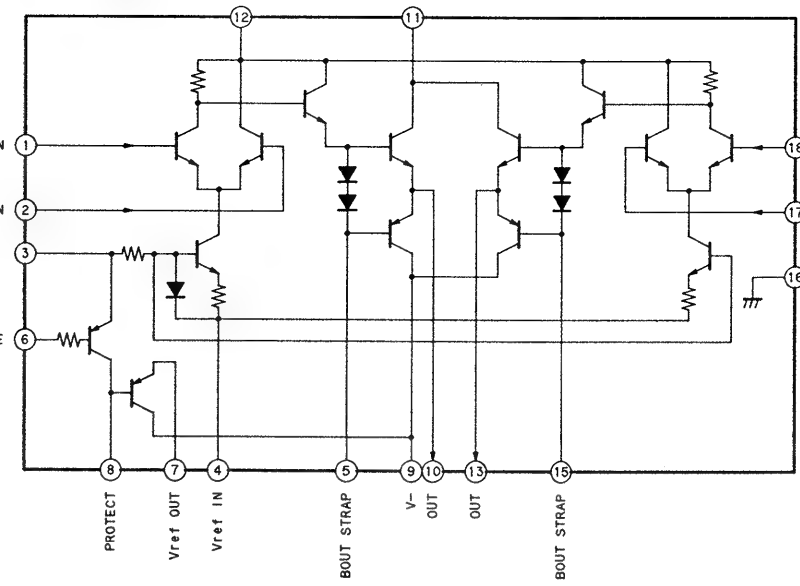
IC 302  
MC14052BCP



IC 651  
LB1639



IC 701  
STK-4122II

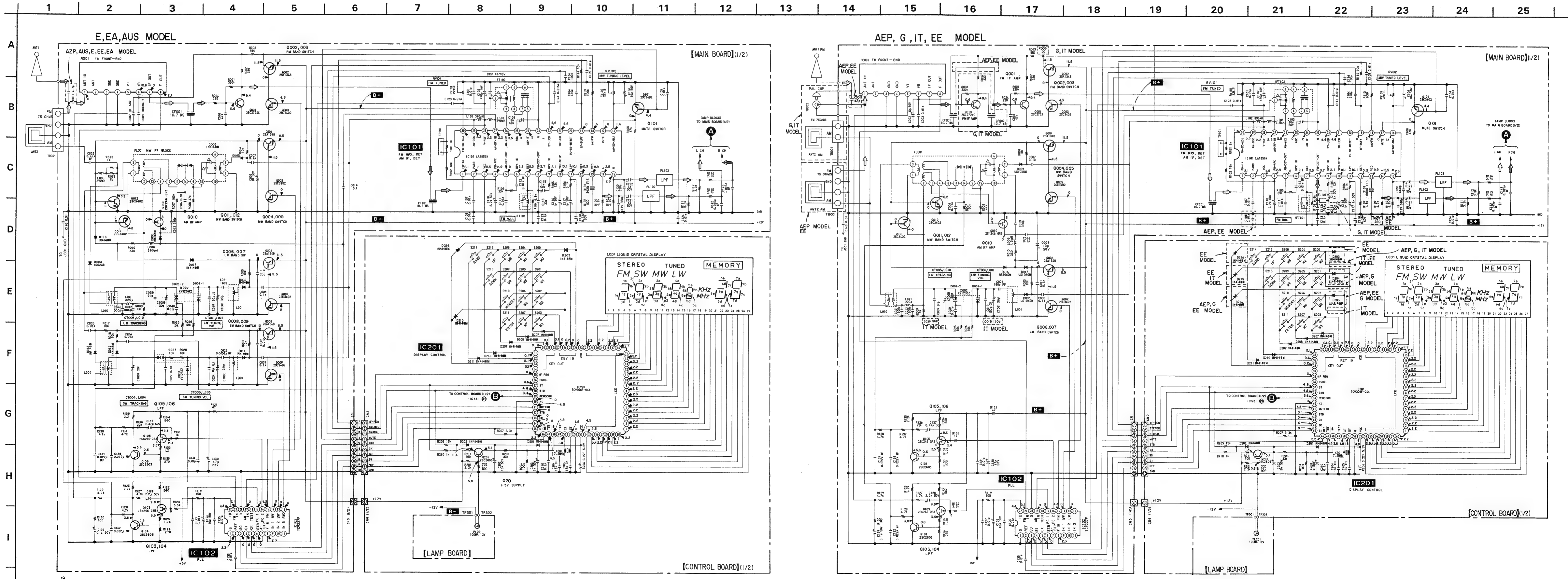


5-5. SCHEMATIC DIAGRAM—TUNER SECTION—

- Note:
- All capacitors are in  $\mu\text{F}$  unless otherwise noted. pF:  $\mu\text{F}$  50V or less are not indicated except for electrolytics and tantalums.
  - All resistors are in  $\Omega$  and  $\frac{1}{4}\text{W}$  or less unless otherwise specified.
  - % : indicates tolerance.
  - $\Delta$  : internal component.
  - $\text{---}/\text{---}$  : fusible resistor.

Note: The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

- B+ : B+ Line
- B- : B- Line
- adjustment for repair.
- Voltage and waveforms are do with respect to ground under no-signal (detuned) conditions. no mark: FM
- Voltagess are taken with a VOM (input impedance 10M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
- $\Rightarrow$  : FM
- AUS: Australian
- EA: Saudi Arabia
- G : Germany
- IT: Italian
- EE : East European





## SECTION 6

### EXPLODED VIEWS

## NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "\*" are not stocked

since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts Example:

KNOB, BALANCE(RED)...(WHT)

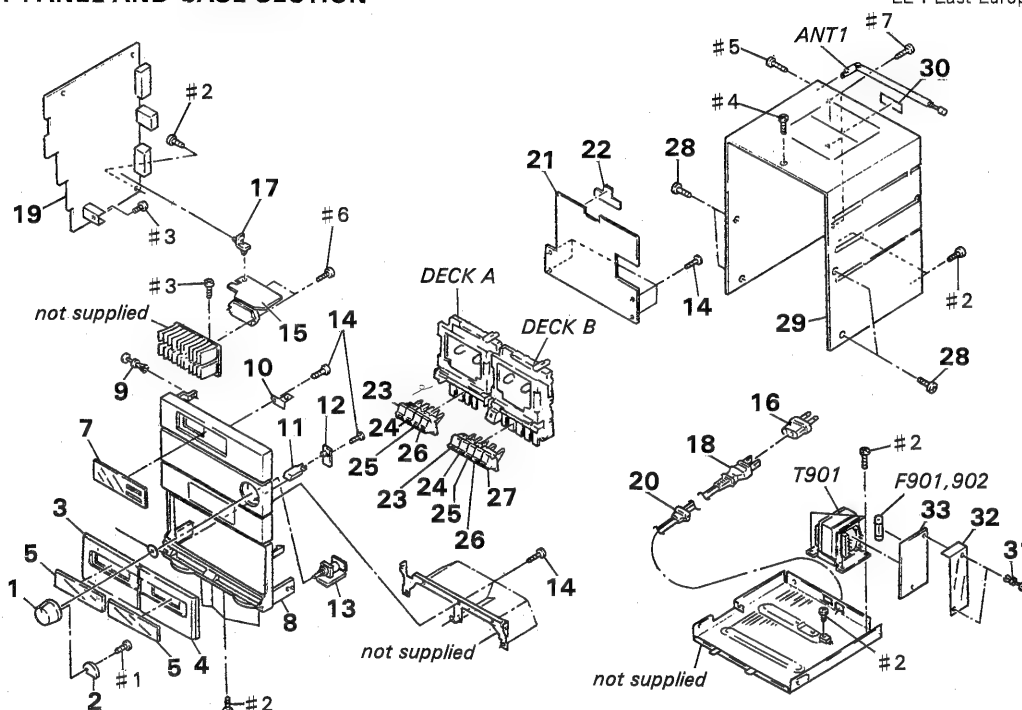
Parts' Color      Cabinet's Color

- Screw(#mark) list is given in the last of this parts list.

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

- AUS: Australian      • EA: Saudi Arabia
- G: Germany          • IT: Italian
- EE: East European

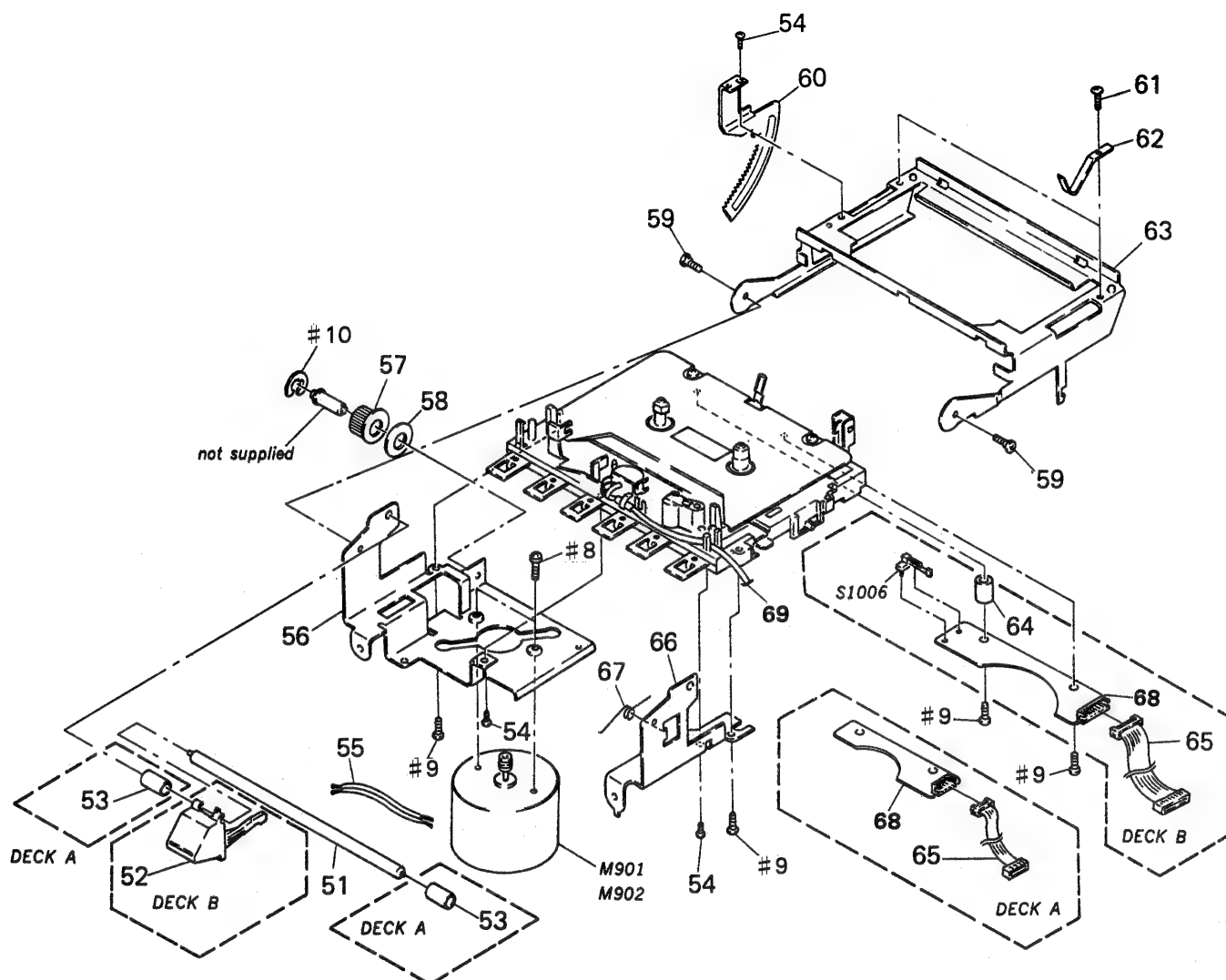
#### 6-1. FRONT PANEL AND CASE SECTION



Ref. No.	Part No.	Description	Remark
1	4-922-790-01	KNOB (VOLUME)	
2	* 1-633-142-11	LED BOARD	
3	A-4323-787-A	LID (A) ASSY, CASSETTE	5
4	A-4323-788-A	LID (B) ASSY, CASSETTE	5
5	4-931-101-01	WINDOW (CASSETTE)	
6	* 4-925-554-01	SPACER	
7	4-928-655-11	PLATE (ST), ORNAMENTAL	
8	X-4941-230-1	PANEL ASSY (AEP/EE/E/AUS/EA/IT)	
8	X-4941-231-1	PANEL ASSY (G)	
9	4-812-134-31	RIVET NYLON, 3.5	
10	* 4-928-660-01	BRACKET (CASE)	
11	4-928-699-01	BUTTON (DOLBY)	
12	* 1-633-135-11	DOLBY SW BOARD	
13	* 1-633-140-11	VOLUME BOARD	
14	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	
15	* A-4345-251-A	POWER AMP BOARD, COMPLETE (G/IT)	
15	* A-4341-473-A	POWER AMP BOARD, COMPLETE (AEP/EE/E/AUS/EA)	
16	$\Delta$ 1-569-007-11	ADAPTER, CONVERSION 2P (E)	
16	$\Delta$ 1-569-008-11	ADAPTER, CONVERSION 2P (AUS/EA)	
17	* 4-922-413-01	HOLDER, PC BOARD	
18	$\Delta$ 1-555-750-00	CORD, POWER (AEP/EE/E/AUS/EA/IT)	
18	$\Delta$ 1-551-188-XX	CORD, POWER (E)	
18	$\Delta$ 1-559-912-11	CORD, POWER (AUS)	
19	* A-4341-470-A	MAIN BOARD, COMPLETE (E/AUS/EA)	
19	* A-4341-801-A	MAIN BOARD, COMPLETE (EE)	
19	* A-4341-847-A	MAIN BOARD, COMPLETE (AEP)	
19	* A-4345-254-A	MAIN BOARD, COMPLETE (G)	
19	* A-4345-411-A	MAIN BOARD, COMPLETE (IT)	

Ref. No.	Part No.	Description	Remark
20	$\Delta$ 3-703-571-00	BUSHING (S) (4516), CORD (E)	
20	$\Delta$ * 3-703-244-00	BUSHING (2104), CORD (AEP/EE/AUS/EA/G/IT)	
21	* A-4341-472-A	CONTROL BOARD, COMPLETE (E/AUS/EA)	
21	* A-4341-799-A	CONTROL BOARD, COMPLETE (EE)	
21	* A-4341-846-A	CONTROL BOARD, COMPLETE (AEP)	
21	* A-4345-253-A	CONTROL BOARD, COMPLETE (G)	
21	* A-4345-410-A	CONTROL BOARD, COMPLETE (IT)	
22	* 1-633-139-11	LAMP BOARD	
23	4-928-697-51	BUTTON (TC) (▶▶)	
24	4-928-697-61	BUTTON (TC) (◀◀)	
25	4-928-697-71	BUTTON (TC) (▶▶▶)	
26	4-928-697-81	BUTTON (TC) (▶▶▶▶)	
27	4-928-697-91	BUTTON (TC) (▶▶▶▶▶)	
28	3-704-366-01	SCREW (CASE) (M3X8)	
29	A-4325-049-A	CASE ASSY (G/IT)	
29	A-4323-789-A	CASE ASSY (AEP/EE/E/AUS/EA)	
30	* 4-928-654-01	LABEL (AUX)	
31	4-812-134-00	RIVET NYLON, 3.5	
32	* 4-928-677-01	COVER (INSULATING)	
33	* 1-633-138-11	POWER SUPPLY BOARD	
ANT1	1-501-270-00	ANTENNA, TELESCOPIC	
F901	$\Delta$ 1-532-215-00	FUSE (0.8A) (E/AUS/EA)	
F902	$\Delta$ 1-532-215-00	FUSE (0.8A)	
T901	$\Delta$ 1-449-544-11	TRANSFORMER, POWER (E/AUS/EA)	
T901	$\Delta$ 1-449-618-11	TRANSFORMER, POWER (AEP/EE/G/IT)	

## 6-2. MECHANISM DECK SECTION(1)

(DECK A:TCM-YM47CW-70M)  
(DECK B:TCM-YM47CW-71M)

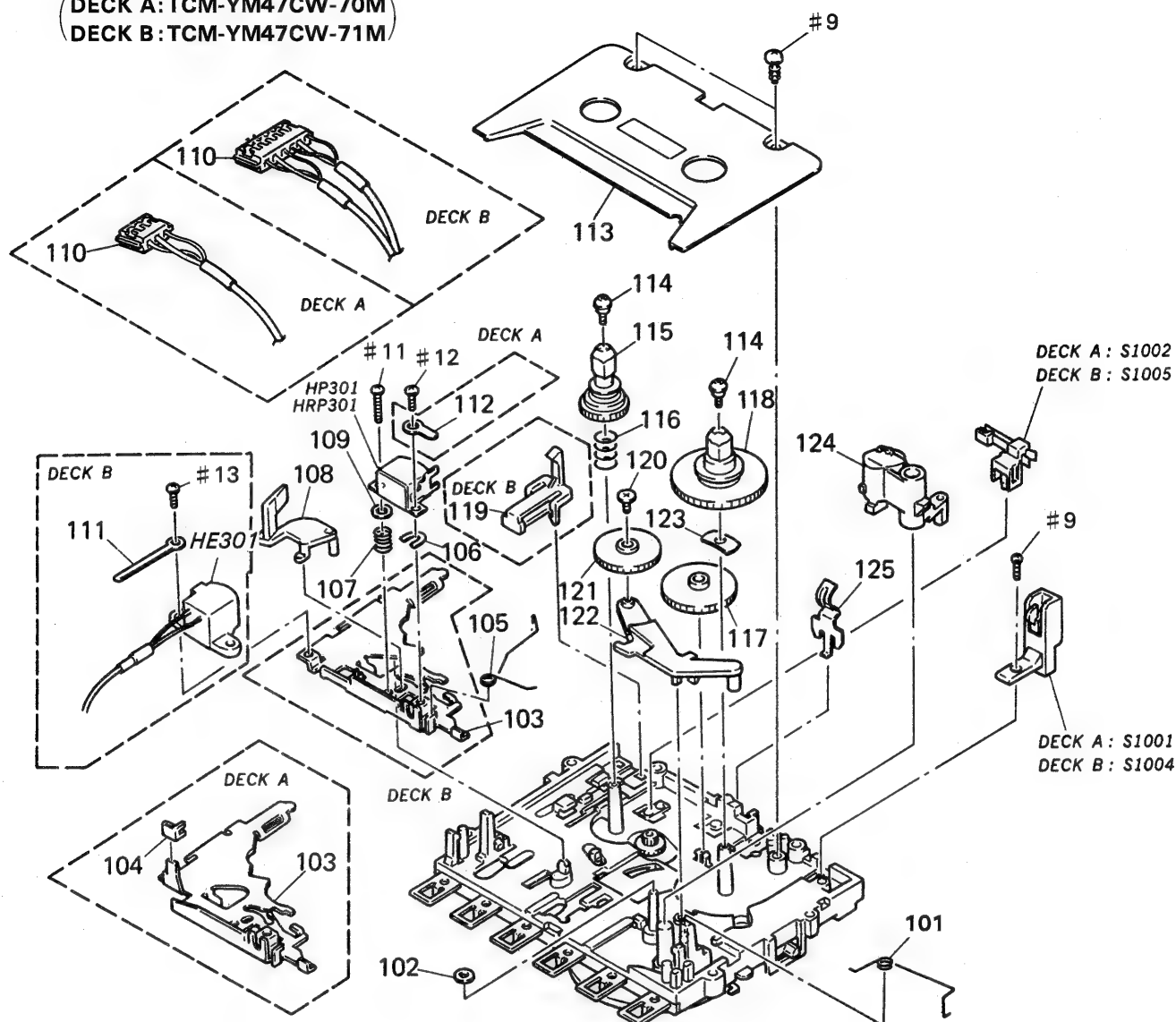
Ref.No.	Part No.	Description	Remark
51	* 3-392-111-01	SHAFT (S), BUTTON	
52	4-928-698-01	BUTTON (TC-REC) (DECK B)	
53	3-392-123-01	SPACER (DECK A)	
54	3-392-133-01	SCREW, D PAN	
55	* 3-392-157-01	LEAD, MOTOR	
56	* 3-392-119-01	HOLDER ASSY, MOTOR	
57	4-895-001-01	GEAR	
58	3-392-122-01	WASHER, P	
59	3-392-121-01	SCREW, STEP	
60	* 3-392-120-01	RACK, GEAR	
61	3-392-153-01	SCREW, D PAN	
62	3-392-108-01	PLATE, KEEP	
63	4-931-114-01	HOLDER, CASSETTE	
64	* 3-392-151-01	SPACER (DECK B)	

Ref.No.	Part No.	Description	Remark
65	* 3-392-161-01	CONNECTOR ASSY (DECK B)	
65	3-392-156-01	CONNECTOR ASSY (DECK A)	
66	* 3-392-118-01	BRACKET, MD	
67	3-392-112-01	SPRING	
68	1-631-562-11	A BOARD (DECK B)	
68	1-631-563-11	B BOARD (DECK A)	
69	* 3-392-163-01	CONNECTOR ASSY (DECK B)	
M901	X-3390-802-1	MOTOR ASSY (DECK A)	
M902	X-3390-802-1	MOTOR ASSY (DECK B)	
S1006	1-571-714-11	SWITCH, LEAF (REC) (DECK B)	



## 6-3. MECHANISM DECK SECTION(2)

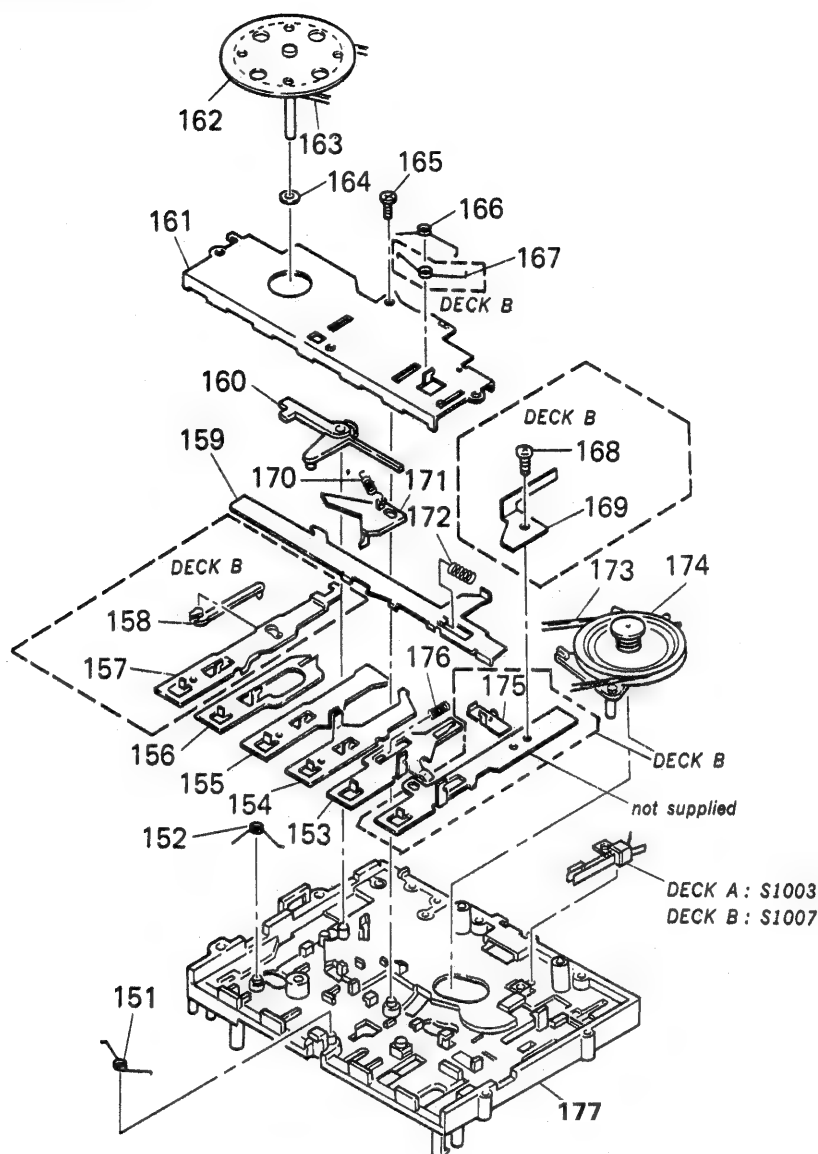
(DECK A:TCM-YM47CW-70M)  
(DECK B:TCM-YM47CW-71M)



Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
101	3-392-109-01	TERMINAL, GROUND		116	4-894-954-01	C SPRING	
102	4-894-969-01	N WASHER		117	4-894-964-01	F GEAR	
103	* 4-894-957-01	HEAD BASE B (DECK B)		118	4-894-963-01	T REEL ASSY	
103	* 4-895-015-01	HEAD BASE (DECK A)		119	4-894-958-01	INTERLOCK ARM (DECK B)	
104	4-895-016-01	TAPE GUIDE (DECK A)		120	4-894-960-01	BUSH	
105	3-390-804-01	SPRING, PINCH ARM		121	4-894-961-01	IDLER GEAR	
106	3-390-821-01	SPACER		122	4-894-962-01	IDLER ARM	
107	4-894-955-01	C SPRING		123	3-390-820-01	SPRING, LEAF	
108	4-894-956-01	TAPE SENSOR		124	3-390-805-01	ROLLER ASSY, PINCH	
109	3-390-823-01	WASHER, F		125	4-894-966-01	SPRING	
110	* 3-392-162-01	CONNECTOR ASSY (DECK B)		HE301	1-543-261-11	HEAD, ERASE (886-01-24) (DECK B)	
110	3-392-155-01	CONNECTOR ASSY (DECK A)		HP301	1-543-424-21	HEAD, MAGNETIC (PB) (DECK A)	
111	* 3-390-812-01	LUG (DECK B)		HRP301	1-543-424-21	HEAD, MAGNETIC (REC/PB) (DECK B)	
112	* 3-390-819-01	LUG (DECK A)		S1001	1-571-036-11	SWITCH, LEAF (DETECTION SW) (Cr02) (DECK A)	
113	3-392-132-01	PLATE, ORNAMENTAL		S1002	1-570-430-11	SWITCH, LEAF (PLAY) (DECK A)	
114	3-390-803-01	BUSHING (D)		S1004	1-571-036-11	SWITCH, LEAF (DETECTION SW) (Cr02) (DECK B)	
115	4-894-953-01	S REEL		S1005	1-570-430-11	SWITCH, LEAF (PLAY) (DECK B)	

## 6-4. MECHANISM DECK SECTION(3)

(DECK A:TCM-YM47CW-70M)  
(DECK B:TCM-YM47CW-71M)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	4-894-999-01	SPRING		165	3-390-822-01	BUSHING (C)	
152	4-894-989-01	SPRING (DECK B)		166	4-894-978-01	SPRING	
152	3-392-116-01	SPRING, TORSION (DECK A)		167	4-894-979-01	SPRING (DECK B)	
153	* 3-390-810-01	LEVER, PLAY		168	3-392-133-01	SCRER, D PAN (DECK B)	
154	* 3-392-117-01	LEVER, REW		169	* 3-392-150-01	PLATE, SW, REC (DECK B)	
155	* 3-392-115-01	LEVER, FF		170	3-390-809-01	SPRING	
156	* 4-894-987-01	S. E LEVER		171	4-894-982-01	S ARM	
157	* 4-894-986-01	PAUSE LEVER (DECK B)		172	4-894-983-01	C SPRING	
158	4-894-985-01	PAUSE ARM (DECK B)		173	3-561-892-00	BELT, SQUARE	
159	* 4-894-984-01	FUNCTION LEVER		174	4-894-997-01	POWER ARM ASSY	
160	3-392-114-01	ARM, EJECT		175	* 3-390-811-01	LEVER, REC STOP (DECK B)	
161	* 3-392-113-01	REINFORCEMENT (S)		176	3-390-827-01	SPRING	
162	3-390-806-11	FW ASSY		177	* 3-392-110-01	CHASSIS ASSY, MECHANICAL	
163	3-392-152-01	BELT		S1003	1-570-715-11	SWITCH, LEAF (MOTOR) (DECK A)	
164	4-894-976-01	P WASHER		S1007	1-570-715-11	SWITCH, LEAF (MOTOR) (DECK B)	

## SECTION 7

### ELECTRICAL PARTS LIST

**CONTROL****POWER AMP****DOLBY SW****POWER SUPPLY****LAMP****VOLUME****LED****NOTE:**

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Screw(#mark) list is given in the last of this parts list.

**●CAPACITORS:**uF:  $\mu$ F**RESISTORS:**

• All resistors are in ohms.

• F: nonflammable

**INDUCTOR:**uH:  $\mu$ H**SEMICONDUCTORS:**In each case, u:  $\mu$ , for example:uA...:  $\mu$ A..., uPA...:  $\mu$ PA...,uPC...:  $\mu$ PC..., uPD...:  $\mu$ PD...

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

- AUS: Australian
- EA: Saudi Arabia
- G: Germany
- IT: Italian
- EE: East European

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
	* A-4341-472-A	CONTROL BOARD, COMPLETE (AUS)		C510	1-124-464-11	ELECT 0.22MF 20% 50V	
	* A-4341-799-A	CONTROL BOARD, COMPLETE (EE)		C511	1-136-159-00	FILM 0.033uF 5% 50V	
	* A-4341-846-A	CONTROL BOARD, COMPLETE (AEP)		C512	1-124-791-11	ELECT 1.0uF 20% 100V	
	* A-4345-253-A	CONTROL BOARD, COMPLETE (G)		C513	1-162-290-31	CERAMIC 470PF 10% 50V	
	* A-4345-410-A	CONTROL BOARD, COMPLETE (IT)		C514	1-136-163-00	FILM 0.068uF 5% 50V	
		*****					
	* A-4341-473-A	POWER AMP BOARD, COMPLETE		C515	1-136-163-00	FILM 0.068uF 5% 50V	
		(AUS/AEP/E/EA/EE)		C516	1-126-096-11	ELECT 10uF 20% 35V	
	* A-4345-251-A	POWER AMP BOARD, COMPLETE (G/IT)		C517	1-126-103-11	ELECT 470uF 20% 16V	
		*****		C518	1-126-103-11	ELECT 470uF 20% 16V	
	* 1-633-135-11	DOLBY SW BOARD		C551	1-123-875-11	ELECT 10uF 20% 50V	
	* 1-633-138-11	POWER SUPPLY BOARD					
	* 1-633-139-11	LAMP BOARD		C552	1-164-159-11	CERAMIC 0.1uF 50V	
	* 1-633-140-11	VOLUME BOARD		C553	1-124-925-11	ELECT 2.2uF 20% 100V	
	* 1-633-142-11	LED BOARD		C556	1-162-294-31	CERAMIC 0.001uF 10% 50V	
		*****		C557	1-124-791-11	ELECT 1.0uF 20% 100V	
				C581	1-124-791-11	ELECT 1.0uF 20% 100V	
	1-558-350-31	CORD (WITH CONNECTOR)					
	* 4-928-665-01	HOUSE (LCD), LIGHTING		C582	1-161-379-00	CERAMIC 0.01uF 20% 25V	
		< CAPACITOR >		C583	1-136-173-00	FILM 0.47uF 5% 50V	
C202	1-123-875-11	ELECT 10uF 20% 50V		C601	1-162-290-31	CERAMIC 470PF 10% 50V	
C203	1-124-791-11	ELECT 1.0uF 20% 100V		C602	1-162-282-31	CERAMIC 100PF 10% 50V	
C204	1-162-205-31	CERAMIC 18PF 5% 50V		C603	1-162-289-31	CERAMIC 390PF 10% 50V	
C205	1-162-205-31	CERAMIC 18PF 5% 50V					
C206	1-125-486-11	DUBLE LAYERS 0.22F 5.5V		C604	1-161-329-00	CERAMIC 0.0068uF 30% 16V	
				C605	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C210	1-164-159-11	CERAMIC 0.1uF 50V		C606	1-161-494-00	CERAMIC 0.022uF 25V	
C501	1-162-290-31	CERAMIC 470PF 10% 50V		C607	1-161-327-00	CERAMIC 0.0033uF 30% 16V	
C502	1-162-282-31	CERAMIC 100PF 10% 50V		C608	1-164-159-11	CERAMIC 0.1uF 50V	
C503	1-162-289-31	CERAMIC 390PF 10% 50V					
C504	1-161-329-00	CERAMIC 0.0068uF 30% 16V		C609	1-161-379-00	CERAMIC 0.01uF 20% 25V	
				C610	1-124-464-11	ELECT 0.22MF 20% 50V	
C505	1-162-294-31	CERAMIC 0.001uF 10% 50V		C611	1-136-159-00	FILM 0.033uF 5% 50V	
C506	1-161-494-00	CERAMIC 0.022uF 25V		C612	1-124-791-11	ELECT 1.0uF 20% 100V	
C507	1-161-327-00	CERAMIC 0.0033uF 30% 16V		C613	1-162-290-31	CERAMIC 470PF 10% 50V	
C508	1-164-159-11	CERAMIC 0.1uF 50V					
C509	1-161-379-00	CERAMIC 0.01uF 20% 25V		C614	1-136-163-00	FILM 0.068uF 5% 50V	
				C615	1-136-163-00	FILM 0.068uF 5% 50V	
				C616	1-126-096-11	ELECT 10uF 20% 35V	
				C621	1-161-379-00	CERAMIC 0.01uF 20% 25V	

## CONTROL

## POWER AMP

## DOLBY SW

## POWER SUPPLY

## LAMP

## VOLUME

## LED

Ref. No.	Part No.	Description	Remark
C622	1-161-379-00	CERAMIC	0.01uF 20% 25V
C651	1-126-101-11	ELECT	100uF 20% 16V
C652	1-124-282-00	ELECT	22uF 20% 25V
C701	1-123-875-11	ELECT	10uF 20% 50V
C702	1-162-290-31	CERAMIC	470PF 10% 50V (AEP/AUS/E/EA/EE)
C703	1-126-233-11	ELECT	22uF 20% 50V
C704	1-124-910-11	ELECT	47uF 20% 50V
C705	1-164-159-11	CERAMIC	0.1uF 50V
C706	1-164-159-11	CERAMIC	0.1uF 50V
C711	1-162-290-31	CERAMIC	470PF 10% 50V (IT/G)
C712	1-162-290-31	CERAMIC	470PF 10% 50V (IT/G)
C751	1-124-910-11	ELECT	47uF 20% 50V
C752	1-124-484-11	ELECT	220uF 20% 35V
C753	1-123-875-11	ELECT	10uF 20% 50V
C756	1-123-875-11	ELECT	10uF 20% 50V
C757	1-123-875-11	ELECT	10uF 20% 50V
C801	1-123-875-11	ELECT	10uF 20% 50V
C802	1-162-290-31	CERAMIC	470PF 10% 50V (AEP/AUS/E/EA/EE)
C803	1-126-233-11	ELECT	22uF 20% 50V
C804	1-124-910-11	ELECT	47uF 20% 50V
C805	1-164-159-11	CERAMIC	0.1uF 50V
C806	1-164-159-11	CERAMIC	0.1uF 50V
C811	1-162-290-31	CERAMIC	470PF 10% 50V (IT/G)
C812	1-162-290-31	CERAMIC	470PF 10% 50V (IT/G)
C901	1-136-165-00	FILM	0.1uF 5% 50V
C902	1-136-165-00	FILM	0.1uF 5% 50V
C961	1-162-294-31	CERAMIC	0.001uF 10% 50V (IT/G)
C962	1-162-294-31	CERAMIC	0.001uF 10% 50V (IT/G)
C963	1-162-294-31	CERAMIC	0.001uF 10% 50V (IT/G)
C964	1-162-294-31	CERAMIC	0.001uF 10% 50V (IT/G)
C965	1-164-159-11	CERAMIC	0.1uF 50V (IT/G)
C966	1-164-159-11	CERAMIC	0.1uF 50V (IT/G)
< CIRCUIT BREAKER >			
CB701	△ 1-532-564-00	BREAKER, CIRCUIT (2.2A)	
CB801	△ 1-532-564-00	BREAKER, CIRCUIT (2.2A)	
< CONNECTOR >			
CN2	* 1-566-924-11	PLUG, CONNECTOR 10P	
CN4	* 1-565-350-11	PLUG, CONNECTOR 6P	
CN6	* 1-565-350-11	PLUG, CONNECTOR 6P	
CN7	* 1-560-061-00	PIN, CONNECTOR 3P	
CN9	* 1-568-518-11	PLUG, CONNECTOR 3P	
CN12	* 1-565-973-11	PLUG (WITH CONNECTOR) (L) 7P	
CN30	* 1-564-337-00	PIN, CONNECTOR 3P	
CN31	* 1-564-517-11	PLUG, CONNECTOR 2P	
CN32	* 1-564-506-11	PLUG, CONNECTOR 3P	
CN32A	* 1-564-506-11	PLUG, CONNECTOR 3P	

Ref. No.	Part No.	Description	Remark
CN33	* 1-564-508-11	PLUG, CONNECTOR 5P	
CNP91	△ * 1-535-139-00	BASE POST 19MM (10MM PITCH) 2P	
< DIODE >			
D201	8-719-987-63	DIODE 1N4148M	
D202	8-719-987-63	DIODE 1N4148M	
D203	8-719-987-63	DIODE 1N4148M (AUS/E/EE/EA)	
D204	8-719-987-63	DIODE 1N4148M (AUS/E/EE/EA/IT)	
D205	8-719-987-63	DIODE 1N4148M (AEP/EE/G)	
D207	8-719-987-63	DIODE 1N4148M	
D208	8-719-987-63	DIODE 1N4148M	
D209	8-719-987-63	DIODE 1N4148M	
D210	8-719-987-63	DIODE 1N4148M	
D211	8-719-987-63	DIODE 1N4148M	
D214	8-719-987-63	DIODE 1N4148M (AEP/EE/G)	
D215	8-719-987-63	DIODE 1N4148M (AUS/E/EE/EA/IT)	
D216	8-719-987-63	DIODE 1N4148M (AUS/E/EE/EA)	
D501	8-719-987-63	DIODE 1N4148M	
D502	8-719-987-63	DIODE 1N4148M	
D503	8-719-987-63	DIODE 1N4148M	
D505	8-719-303-13	LED SEL1210W	
D506	8-719-303-13	LED SEL1210W	
D507	8-719-303-13	LED SEL1210W	
D508	8-719-303-13	LED SEL1210W	
D511	8-719-303-13	LED SEL1210W	
D512	8-719-987-63	DIODE 1N4148M	
D651	8-719-301-39	LED SEL2210S-D	
D911	8-719-500-36	DIODE D2SB20	
< FUSE >			
F901	△ 1-532-215-00	FUSE (0.8A)	
F902	△ 1-532-215-00	FUSE (0.8A) (AUS/E/EA)	
< HOLDER >			
H901	* 1-533-213-31	HOLDER, FUSE (AUS/E/EA)	
H902	* 1-533-213-31	HOLDER, FUSE	
H902	* 1-533-217-31	HOLDER, FUSE (IT/G)	
H903	* 1-533-213-31	HOLDER, FUSE (AUS/E/EA)	
H904	* 1-533-213-31	HOLDER, FUSE	
H904	* 1-533-217-31	HOLDER, FUSE (IT/G)	
< IC >			
IC201	8-759-234-33	IC TC9306F-044	
IC501	8-759-602-04	IC M5226P	
IC502	8-759-634-50	IC M5218AL	
IC531	8-749-920-83	IC GP1U52XB	

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

## CONTROL

## POWER AMP

## DOLBY SW

## POWER SUPPLY

## LAMP

## VOLUME

## LED

Ref. No.	Part No.	Description	Remark
IC551	8-759-632-01	IC M50725-116SP	
IC601	8-759-602-04	IC M5226P	
IC651	8-759-820-62	IC LB1639	
IC701	8-749-900-95	IC STK4122MK2	
< LCD >			
LCD1	1-808-659-11	DISPLAY PANEL, LIQUID CRYSTAL	
< PILOT LAMP >			
PL201	1-518-511-21	LAMP, PILOT	
< TRANSISTOR >			
Q201	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q501	8-729-900-74	TRANSISTOR DTC143TS	
Q551	8-729-900-80	TRANSISTOR DTC114ES	
Q552	8-729-900-61	TRANSISTOR DTA114ES	
Q553	8-729-900-80	TRANSISTOR DTC114ES	
Q554	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q601	8-729-900-74	TRANSISTOR DTC143TS	
< RESISTOR >			
R201	1-249-421-11	CARBON 2.2K 5% 1/4W	
R202	1-249-421-11	CARBON 2.2K 5% 1/4W	
R203	1-249-435-11	CARBON 33K 5% 1/4W	
R204	1-249-441-11	CARBON 100K 5% 1/4W	
R205	1-249-431-11	CARBON 15K 5% 1/4W	
R207	1-249-423-11	CARBON 3.3K 5% 1/4W	
R210	1-249-417-11	CARBON 1K 5% 1/4W	
R211	1-249-405-11	CARBON 100 5% 1/4W	
R501	1-249-413-11	CARBON 470 5% 1/4W	
R502	1-249-425-11	CARBON 4.7K 5% 1/4W	
R503	1-247-891-00	CARBON 330K 5% 1/4W	
R505	1-249-418-11	CARBON 1.2K 5% 1/4W	
R506	1-247-903-00	CARBON 1M 5% 1/4W	
R507	1-249-425-11	CARBON 4.7K 5% 1/4W	
R508	1-249-405-11	CARBON 100 5% 1/4W	
R509	1-249-405-11	CARBON 100 5% 1/4W	
R551	1-249-441-11	CARBON 100K 5% 1/4W	
R552	1-247-903-00	CARBON 1M 5% 1/4W	
R554	1-249-423-11	CARBON 3.3K 5% 1/4W	
R555	1-249-417-11	CARBON 1K 5% 1/4W	
R557	1-249-418-11	CARBON 1.2K 5% 1/4W	
R558	1-249-422-11	CARBON 2.7K 5% 1/4W	
R559	1-249-421-11	CARBON 2.2K 5% 1/4W	
R560	1-249-425-11	CARBON 4.7K 5% 1/4W	
R561	1-249-410-11	CARBON 270 5% 1/4W	
R562	1-249-429-11	CARBON 10K 5% 1/4W	

Ref. No.	Part No.	Description	Remark
R564	1-249-405-11	CARBON 100 5% 1/4W	
R565	1-249-405-11	CARBON 100 5% 1/4W	
R566	1-249-405-11	CARBON 100 5% 1/4W	
R567	1-249-417-11	CARBON 1K 5% 1/4W	
R568	1-249-429-11	CARBON 10K 5% 1/4W	
R569	1-249-413-11	CARBON 470 5% 1/4W	
R570	1-249-417-11	CARBON 1K 5% 1/4W	
R571	1-249-417-11	CARBON 1K 5% 1/4W	
R581	1-249-429-11	CARBON 10K 5% 1/4W	
R582	1-249-417-11	CARBON 1K 5% 1/4W	
R583	1-249-429-11	CARBON 10K 5% 1/4W	
R590	1-249-405-11	CARBON 100 5% 1/4W	
R601	1-249-413-11	CARBON 470 5% 1/4W	
R602	1-249-425-11	CARBON 4.7K 5% 1/4W	
R603	1-247-891-00	CARBON 330K 5% 1/4W	
R605	1-249-418-11	CARBON 1.2K 5% 1/4W	
R606	1-247-903-00	CARBON 1M 5% 1/4W	
R607	1-249-425-11	CARBON 4.7K 5% 1/4W	
R651	1-249-421-11	CARBON 2.2K 5% 1/4W	
R652	1-249-425-11	CARBON 4.7K 5% 1/4W	
R653	1-249-425-11	CARBON 4.7K 5% 1/4W	
R701	1-249-417-11	CARBON 1K 5% 1/4W	
R702	1-249-438-11	CARBON 56K 5% 1/4W	
R703	1-249-413-11	CARBON 470 5% 1/4W	
R704	1-249-438-11	CARBON 56K 5% 1/4W	
R705	1-249-482-11	CARBON 4.7 5% 1/2W	
R706	1-249-421-11	CARBON 2.2K 5% 1/4W	
R707	1-249-421-11	CARBON 2.2K 5% 1/4W	
R751	△ 1-212-881-11	FUSIBLE 100 5% 1/4W	F
R752	△ 1-212-881-11	FUSIBLE 100 5% 1/4W	F
R753	1-247-752-11	CARBON 1K 5% 1/2W	
R754	1-247-752-11	CARBON 1K 5% 1/2W	
R759	1-249-437-11	CARBON 47K 5% 1/4W	
R760	1-247-883-00	CARBON 150K 5% 1/4W	
R761	1-249-429-11	CARBON 10K 5% 1/4W	
R771	△ 1-212-881-11	FUSIBLE 100 5% 1/4W	F
R801	1-249-417-11	CARBON 1K 5% 1/4W	
R802	1-249-438-11	CARBON 56K 5% 1/4W	
R803	1-249-413-11	CARBON 470 5% 1/4W	
R804	1-249-438-11	CARBON 56K 5% 1/4W	
R805	1-249-482-11	CARBON 4.7 5% 1/2W	
R806	1-249-421-11	CARBON 2.2K 5% 1/4W	
R807	1-249-421-11	CARBON 2.2K 5% 1/4W	
< VARIABLE RESISTOR >			
RV501	1-238-451-21	RES. VAR. SLIDE 250K (100Hz)	
RV502	1-238-451-21	RES. VAR. SLIDE 250K (400Hz)	
RV503	1-238-451-21	RES. VAR. SLIDE 250K (1kHz)	
RV504	1-238-451-21	RES. VAR. SLIDE 250K (4kHz)	
RV505	1-238-451-21	RES. VAR. SLIDE 250K (12kHz)	

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

## CONTROL

## POWER AMP

## DOLBY SW

## POWER SUPPLY

## LAMP

## VOLUME

## LED

## MAIN

Ref. No.	Part No.	Description	Remark
RV551	1-238-101-31	RES. VAR. SLIDE 100K (BALANCE)	
RV601	1-238-451-21	RES. VAR. SLIDE 250K (100Hz)	
RV602	1-238-451-21	RES. VAR. SLIDE 250K (400Hz)	
RV603	1-238-451-21	RES. VAR. SLIDE 250K (1kHz)	
RV604	1-238-451-21	RES. VAR. SLIDE 250K (4kHz)	
RV605	1-238-451-21	RES. VAR. SLIDE 250K (12kHz)	
RV651	1-238-540-11	RES. VAR. CARBON 50K/50K (VOLUME)	

## &lt; SWITCH &gt;

S200	1-554-303-21	SWITCH, TACTILE (0)	
S201	1-554-303-21	SWITCH, TACTILE (1)	
S202	1-554-303-21	SWITCH, TACTILE (2)	
S203	1-554-303-21	SWITCH, TACTILE (3)	
S204	1-554-303-21	SWITCH, TACTILE (4)	
S205	1-554-303-21	SWITCH, TACTILE (5)	
S206	1-554-303-21	SWITCH, TACTILE (6)	
S207	1-554-303-21	SWITCH, TACTILE (7)	
S208	1-554-303-21	SWITCH, TACTILE (8)	
S209	1-554-303-21	SWITCH, TACTILE (9)	
S210	1-554-303-21	SWITCH, TACTILE (MEMORY)	
S211	1-554-303-21	SWITCH, TACTILE (ENTER)	
S212	1-554-303-21	SWITCH, TACTILE (+)	
S213	1-554-303-21	SWITCH, TACTILE (-)	
S214	1-554-303-21	SWITCH, TACTILE (BAND)	
S341	1-554-419-00	SWITCH, PUSH (1 KEY) (DOLBY NR)	
S501	1-570-313-11	SWITCH, KEYBOARD (POWER)	
S503	1-554-303-21	SWITCH, TACTILE (TAPE)	
S504	1-554-303-21	SWITCH, TACTILE (CD)	
S505	1-554-303-21	SWITCH, TACTILE (TUNER)	
S506	1-554-303-21	SWITCH, TACTILE (AUX)	
S901	△ 1-571-722-11	SWITCH, VOLTAGE SELECTION (AUS/E/EA)	

## &lt; CRYSTAL &gt;

X201	1-577-191-11	VIBRATOR, CRYSTAL (7.2MHz)	
X551	1-577-358-21	VIBRATOR, CERAMIC (4MHz)	

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- \* A-4341-470-A MAIN BOARD, COMPLETE (AUS/E/EA)
- \* A-4341-801-A MAIN BOARD, COMPLETE (EE)
- \* A-4341-847-A MAIN BOARD, COMPLETE (AEP)
- \* A-4345-411-A MAIN BOARD, COMPLETE (IT)
- \* A-4345-254-A MAIN BOARD, COMPLETE (G)

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- \* 3-309-144-21 HEAT SINK
- 7-682-548-04 SCREW +BVTT 3X8 (S)

Ref. No.	Part No.	Description	Remark
< CAPACITOR >			
C001	1-162-195-31	CERAMIC 4.7PF 10% 50V (AEP/AUS/E/EE/EA)	
C002	1-123-875-11	ELECT 10uF 20% 50V	
C003	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C005	1-123-875-11	ELECT 10uF 20% 50V	
C006	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C007	1-164-159-11	CERAMIC 0.1uF 50V	
C008	1-164-159-11	CERAMIC 0.1uF 50V	
C009	1-164-159-11	CERAMIC 0.1uF 50V (AUS/E/EA)	
C011	1-164-159-11	CERAMIC 0.1uF 50V	
C012	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C013	1-162-288-31	CERAMIC 330PF 10% 50V	
C014	1-164-159-11	CERAMIC 0.1uF 50V	
C019	1-101-081-00	CERAMIC 130PF 5% 50V (except IT)	
C019	1-102-815-00	CERAMIC 110PF 5% 50V (IT)	
C021	1-103-707-00	POLYSTYRENE 180PF 5% 50V	
C024	1-102-945-00	CERAMIC 8PF 0.5PF 50V (AUS/E/EA)	
C025	1-130-480-00	MYLAR 0.0056uF 5% 50V (AUS/E/EA)	
C026	1-136-173-00	FILM 0.47uF 5% 50V (AUS/E/EA)	
C027	1-161-379-00	CERAMIC 0.01uF 30% 16V (AUS/E/EA)	
C035	1-161-379-00	CERAMIC 0.01uF 30% 16V (AUS/E/EA)	
C036	1-161-379-00	CERAMIC 0.01uF 30% 16V (AUS/E/EA)	
C038	1-162-215-31	CERAMIC 47PF 5% 50V	
C039	1-164-064-11	CERAMIC 56PF 5% 50V (IT)	
C039	1-164-069-11	CERAMIC 91PF 5% 50V (except IT)	
C040	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C041	1-161-374-11	CERAMIC 0.0015uF 20% 50V	
C042	1-102-120-00	CERAMIC 0.0018uF 10% 50V	
C101	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C102	1-124-472-11	ELECT 470uF 20% 10V	
C103	1-123-875-11	ELECT 10uF 20% 50V	
C104	1-162-290-31	CERAMIC 470PF 10% 50V	
C105	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C106	1-123-875-11	ELECT 10uF 20% 50V	
C107	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C108	1-161-379-00	CERAMIC 0.01uF 20% 25V (except IT)	
C110	1-124-925-11	ELECT 2.2uF 20% 100V	
C111	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C112	1-136-153-00	FILM 0.01uF 5% 50V	
C113	1-162-211-31	CERAMIC 33PF 5% 50V	
C114	1-162-282-11	CERAMIC 100PF 10% 50V (IT/G)	
C115	1-124-791-11	ELECT 1.0uF 20% 100V	
C116	1-124-791-11	ELECT 1.0uF 20% 100V	
C117	1-124-791-11	ELECT 1.0uF 20% 100V	
C118	1-124-252-00	ELECT 0.33uF 20% 50V	
C119	1-162-288-31	CERAMIC 330PF 10% 50V	

The components identified by mark  
△ or dotted line with mark △ are  
critical for safety.  
Replace only with part number  
specified.

## MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C120	1-162-288-31	CERAMIC	330PF 10% 50V	C334	1-162-286-31	CERAMIC	220PF 10% 50V
C121	1-124-791-11	ELECT	1.0uF 20% 100V	C335	1-136-157-00	FILM	0.022uF 5% 50V
C122	1-124-791-11	ELECT	1.0uF 20% 100V	C336	1-124-443-00	ELECT	100uF 20% 10V
C123	1-161-379-00	CERAMIC	0.01uF 20% 25V	C337	1-123-875-11	ELECT	10uF 20% 50V
C124	1-161-379-00	CERAMIC	0.01uF 20% 25V	C338	1-136-157-00	FILM	0.022uF 5% 50V
C125	1-161-379-00	CERAMIC	0.01uF 20% 25V	C339	1-124-477-11	ELECT	47uF 20% 25V
C126	1-123-875-11	ELECT	10uF 20% 50V	C340	1-161-379-00	CERAMIC	0.01uF 20% 25V
C127	1-161-379-00	CERAMIC	0.01uF 20% 25V	C341	1-123-875-11	ELECT	10uF 20% 50V
C128	1-124-925-11	ELECT	2.2uF 20% 100V	C342	1-162-292-31	CERAMIC	680PF 10% 50V
C129	1-124-463-00	ELECT	0.1uF 20% 50V	C343	1-123-875-11	ELECT	10uF 20% 50V
C130	1-124-477-11	ELECT	47uF 20% 25V	C344	1-162-292-31	CERAMIC	680PF 10% 50V
C131	1-161-379-00	CERAMIC	0.01uF 20% 25V	C345	1-123-875-11	ELECT	10uF 20% 50V
C132	1-136-157-00	FILM	0.022uF 5% 50V	C346	1-123-875-11	ELECT	10uF 20% 50V
C133	1-164-159-11	CERAMIC	0.1uF 50V (AEP/AUS/E/EE/EA)	C347	1-124-254-00	ELECT	0.68uF 20% 50V
C134	1-161-379-00	CERAMIC	0.01uF 20% 25V	C348	1-124-443-00	ELECT	100uF 20% 10V
C135	1-161-379-00	CERAMIC	0.01uF 20% 25V	C349	1-123-875-11	ELECT	10uF 20% 50V
C136	1-162-282-31	CERAMIC	100PF 10% 50V	C350	1-123-875-11	ELECT	10uF 20% 50V
C137	1-124-902-00	ELECT	0.47uF 20% 50V	C351	1-162-282-31	CERAMIC	100PF 10% 50V
C138	1-136-157-00	FILM	0.022uF 5% 50V	C352	1-130-477-00	MYLAR	0.0033uF 5% 50V
C139	1-136-157-00	FILM	0.022uF 5% 50V	C353	1-130-480-00	MYLAR	0.0056uF 5% 50V
C140	1-161-379-00	CERAMIC	0.01uF 20% 25V	C354	1-136-163-00	FILM	0.068uF 5% 50V
C141	1-161-379-00	CERAMIC	0.01uF 20% 25V	C355	1-123-875-11	ELECT	10uF 20% 50V
C142	1-136-155-00	FILM	0.015uF 5% 50V	C356	1-162-282-31	CERAMIC	100PF 10% 50V
C143	1-136-155-00	FILM	0.015uF 5% 50V	C357	1-162-282-31	CERAMIC	100PF 10% 50V
C301	1-162-282-31	CERAMIC	100PF 10% 50V	C361	1-124-791-11	ELECT	1.0uF 20% 100V
C302	1-162-282-31	CERAMIC	100PF 10% 50V	C362	1-161-374-11	CERAMIC	0.0015uF 20% 50V
C304	1-162-282-31	CERAMIC	100PF 10% 50V	C363	1-161-329-00	CERAMIC	0.0068uF 30% 16V
C310	1-162-282-31	CERAMIC	100PF 10% 50V	C364	1-124-925-11	ELECT	2.2uF 20% 100V
C311	1-162-282-31	CERAMIC	100PF 10% 50V	C365	1-162-286-31	CERAMIC	220PF 10% 50V
C312	1-123-875-11	ELECT	10uF 20% 50V	C366	1-162-286-31	CERAMIC	220PF 10% 50V
C313	1-161-379-00	CERAMIC	0.01uF 20% 25V	C367	1-136-153-00	FILM	0.01uF 5% 50V
C315	1-161-379-00	CERAMIC	0.01uF 20% 25V	C368	1-130-475-00	MYLAR	0.0022uF 5% 50V
C316	1-161-379-00	CERAMIC	0.01uF 20% 25V	C369	1-130-475-00	MYLAR	0.0022uF 5% 50V
C317	1-124-477-11	ELECT	47uF 20% 25V	C371	1-162-294-31	CERAMIC	0.001uF 10% 50V
C318	1-124-477-11	ELECT	47uF 20% 25V	C372	1-162-282-31	CERAMIC	100PF 10% 50V
C319	1-161-379-00	CERAMIC	0.01uF 20% 25V	C373	1-162-288-31	CERAMIC	330PF 10% 50V
C321	1-162-292-31	CERAMIC	680PF 10% 50V	C374	1-162-284-31	CERAMIC	150PF 10% 50V
C322	1-123-875-11	ELECT	10uF 20% 50V	C375	1-124-463-00	ELECT	0.1uF 20% 50V
C323	1-162-286-31	CERAMIC	220PF 10% 50V	C376	1-162-282-31	CERAMIC	100PF 10% 50V
C324	1-162-286-31	CERAMIC	220PF 10% 50V	C377	1-162-282-31	CERAMIC	100PF 10% 50V
C325	1-136-157-00	FILM	0.022uF 5% 50V	C382	1-124-477-11	ELECT	47uF 20% 25V
C326	1-124-443-00	ELECT	100uF 20% 10V	C383	1-124-791-11	ELECT	1.0uF 20% 100V
C327	1-123-875-11	ELECT	10uF 20% 50V	C384	1-124-120-11	ELECT	220uF 20% 25V
C328	1-136-157-00	FILM	0.022uF 5% 50V	C391	1-162-286-31	CERAMIC	220PF 10% 50V
C329	1-124-477-11	ELECT	47uF 20% 25V	C401	1-162-282-31	CERAMIC	100PF 10% 50V
C330	1-161-379-00	CERAMIC	0.01uF 20% 25V	C402	1-162-282-31	CERAMIC	100PF 10% 50V
C331	1-162-292-31	CERAMIC	680PF 10% 50V	C404	1-162-282-31	CERAMIC	100PF 10% 50V
C332	1-123-875-11	ELECT	10uF 20% 50V	C410	1-162-282-31	CERAMIC	100PF 10% 50V
C333	1-162-286-31	CERAMIC	220PF 10% 50V	C411	1-162-282-31	CERAMIC	100PF 10% 50V

## MAIN

Ref. No.	Part No.	Description	Remark
C412	1-123-875-11	ELECT	10uF 20% 50V
C421	1-162-292-31	CERAMIC	680PF 10% 50V
C422	1-123-875-11	ELECT	10uF 20% 50V
C423	1-162-286-31	CERAMIC	220PF 10% 50V
C424	1-162-286-31	CERAMIC	220PF 10% 50V
C425	1-136-157-00	FILM	0.022uF 5% 50V
C426	1-124-443-00	ELECT	100uF 20% 10V
C427	1-123-875-11	ELECT	10uF 20% 50V
C428	1-136-157-00	FILM	0.022uF 5% 50V
C429	1-123-875-11	ELECT	10uF 20% 50V
C431	1-162-292-31	CERAMIC	680PF 10% 50V
C432	1-123-875-11	ELECT	10uF 20% 50V
C433	1-162-286-31	CERAMIC	220PF 10% 50V
C434	1-162-286-31	CERAMIC	220PF 10% 50V
C435	1-136-157-00	FILM	0.022uF 5% 50V
C436	1-124-443-00	ELECT	100uF 20% 10V
C437	1-123-875-11	ELECT	10uF 20% 50V
C438	1-136-157-00	FILM	0.022uF 5% 50V
C439	1-123-875-11	ELECT	10uF 20% 50V
C441	1-123-875-11	ELECT	10uF 20% 50V
C442	1-162-292-31	CERAMIC	680PF 10% 50V
C443	1-123-875-11	ELECT	10uF 20% 50V
C444	1-162-292-31	CERAMIC	680PF 10% 50V
C445	1-123-875-11	ELECT	10uF 20% 50V
C446	1-123-875-11	ELECT	10uF 20% 50V
C447	1-124-254-00	ELECT	0.68uF 20% 50V
C448	1-124-477-11	ELECT	47uF 20% 25V
C449	1-123-875-11	ELECT	10uF 20% 50V
C451	1-162-282-31	CERAMIC	100PF 10% 50V
C452	1-130-477-00	MYLAR	0.0033uF 5% 50V
C453	1-130-480-00	MYLAR	0.0056uF 5% 50V
C454	1-136-163-00	FILM	0.068uF 5% 50V
C455	1-123-875-11	ELECT	10uF 20% 50V
C456	1-162-282-31	CERAMIC	100PF 10% 50V
C457	1-162-282-31	CERAMIC	100PF 10% 50V
C491	1-162-286-31	CERAMIC	220PF 10% 50V
C758	1-124-120-11	ELECT	220uF 20% 25V
C791	1-164-159-11	CERAMIC	0.1uF 50V (1T/G)
C891	1-164-159-11	CERAMIC	0.1uF 50V (1T/G)
C903	1-124-618-11	ELECT	2200uF 20% 35V
C904	1-124-618-11	ELECT	2200uF 20% 35V
C905	1-124-927-11	ELECT	4.7uF 20% 100V
C906	1-124-927-11	ELECT	4.7uF 20% 100V
C907	1-123-875-11	ELECT	10uF 20% 50V
C910	1-123-875-11	ELECT	10uF 20% 50V
C911	1-124-443-00	ELECT	100uF 20% 10V
C912	1-124-791-11	ELECT	1.0uF 20% 100V
C951	1-161-379-00	CERAMIC	0.001uF 30% 16V (1T/G)
C952	1-164-159-11	CERAMIC	0.1uF 50V (1T/G)

Ref. No.	Part No.	Description	Remark
C953	1-162-294-31	CERAMIC	0.001uF 10% 50V (1T/G)
C954	1-161-379-00	CERAMIC	0.001uF 30% 16V (1T/G)
< FILTER >			
CF001	1-567-389-11	FILTER, CERAMIC	
CF002	1-567-389-11	FILTER, CERAMIC (1T/G)	
CF101	1-567-389-11	FILTER, CERAMIC	
< CONNECTOR >			
CN1	* 1-566-926-11	SOCKET, CONNECTOR 10P	
CN3	* 1-565-349-11	SOCKET, CONNECTOR 6P	
CN5	* 1-565-349-11	SOCKET, CONNECTOR 6P	
CN7	1-560-061-00	PIN, CONNECTOR 3P	
CN8	* 1-564-336-00	PIN, CONNECTOR 2P	
CN13	* 1-565-956-11	SOCKET, CONNECTOR 7P	
CN31	* 1-564-506-11	PLUG, CONNECTOR 3P	
CN32	* 1-564-509-11	PLUG, CONNECTOR 6P	
CN33	* 1-564-505-11	PLUG, CONNECTOR 2P	
CN34	* 1-564-338-00	PIN, CONNECTOR 4P	
CN35	* 1-564-341-11	PIN, CONNECTOR 7P	
< TRIMMER >			
CT001	1-141-245-00	CAP, TRIMMER 30PF	
CT003	1-141-227-00	CAP, TRIMMER 20PF (AUS/E/EA)	
CT004	1-141-227-00	CAP, TRIMMER 20PF (AUS/E/EA)	
CT005	1-141-245-00	CAP, TRIMMER 30PF	
< DIODE >			
D001	8-719-902-79	DIODE KV1236Z (AUS/E/EA)	
D002	8-719-902-79	DIODE KV1236Z	
D003	8-719-987-63	DIODE 1N4148M	
D004	8-719-903-27	DIODE 1SS168 (AUS/E/EA)	
D005	8-719-987-63	DIODE 1N4148M	
D006	8-719-987-63	DIODE 1N4148M	
D011	8-719-987-63	DIODE 1N4148M (AUS/E/EA)	
D013	8-719-987-63	DIODE 1N4148M (AUS/E/EA)	
D014	8-719-987-63	DIODE 1N4148M (AUS/E/EA)	
D016	8-719-987-63	DIODE 1N4148M	
D017	8-719-987-63	DIODE 1N4148M	
D301	8-719-933-48	DIODE HZS7B3L	
D302	8-719-933-48	DIODE HZS7B3L	
D361	8-719-987-63	DIODE 1N4148M	
D362	8-719-987-63	DIODE 1N4148M	
D381	8-719-987-63	DIODE 1N4148M	
D382	8-719-987-63	DIODE 1N4148M	
D383	8-719-987-63	DIODE 1N4148M	
D384	8-719-987-63	DIODE 1N4148M	
D385	8-719-987-63	DIODE 1N4148M	



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
D386	8-719-987-63	DIODE 1N4148M		L010	1-402-425-11	COIL (ANT, LW)	
D387	8-719-987-63	DIODE 1N4148M		L011	1-408-425-00	INDUCTOR 220uH	
D388	8-719-987-63	DIODE 1N4148M		L101	1-408-399-00	INDUCTOR, MICRO 1.5 5%	
D389	8-719-987-63	DIODE 1N4148M		L102	1-410-489-11	INDUCTOR 390uH	
D390	8-719-987-63	DIODE 1N4148M		L351	1-410-779-21	INDUCTOR 22mH	
D751	8-719-987-63	DIODE 1N4148M		L352	1-410-779-21	INDUCTOR 22mH	
D752	8-719-987-63	DIODE 1N4148M		L361	1-410-489-11	INDUCTOR 390uH	
< FRONT END >				L451	1-410-779-21	INDUCTOR 22mH	
FE1	1-465-006-11	FRONT END (FM) (2 GANG) (AEP/AUS/E/EA)		L452	1-410-779-21	INDUCTOR 22mH	
FE1	1-465-007-11	FRONT END (FM) (4 GANG) (IT/G)		< TRANSISTOR >			
FE1	1-465-396-11	FRONT END (FM) (3 GANG) (EE)		Q001	8-729-620-19	TRANSISTOR 2SC2724-CD	
< FILTER >				Q002	8-729-900-61	TRANSISTOR DTA114ES	
FL001	1-235-936-11	ENCAPSULATED COMPONENT		Q003	8-729-900-80	TRANSISTOR DTC114ES	
FL101	1-236-465-11	ENCAPSULATED COMPONENT (IT/G)		Q004	8-729-900-61	TRANSISTOR DTA114ES	
FL102	1-235-164-00	FILTER, LOW PASS		Q005	8-729-900-80	TRANSISTOR DTC114ES	
FL103	1-235-164-00	FILTER, LOW PASS		Q006	8-729-900-61	TRANSISTOR DTA114ES	
< IC >				Q007	8-729-900-80	TRANSISTOR DTC114ES	
IC101	8-759-821-45	IC LA1851N		Q008	8-729-900-61	TRANSISTOR DTA114ES (AUS/E/EA)	
IC102	8-759-231-01	IC TC9227P		Q009	8-729-900-80	TRANSISTOR DTC114ES (AUS/E/EA)	
IC301	8-759-634-50	IC M5218AL		Q010	8-729-202-67	TRANSISTOR 2SK246-GR3	
IC302	8-759-152-34	IC MC14052BCP		Q011	8-729-900-80	TRANSISTOR DTC114ES	
IC303	8-759-634-50	IC M5218AL		Q012	8-729-900-80	TRANSISTOR DTC114ES	
IC321	8-759-971-24	IC BA3406AL		Q013	8-729-672-42	TRANSISTOR 2SC2724C (IT/G)	
IC331	8-759-971-24	IC BA3406AL		Q101	8-729-900-80	TRANSISTOR DTC114ES	
IC341	8-752-034-26	IC CXA1101P		Q103	8-729-202-67	TRANSISTOR 2SK246-GR3	
IC351	8-759-634-50	IC M5218AL		Q104	8-729-620-05	TRANSISTOR 2SC2603-EF	
IC371	8-759-634-50	IC M5218AL		Q105	8-729-202-67	TRANSISTOR 2SK246-GR3	
IC381	8-759-240-01	IC TC4001BP		Q106	8-729-620-05	TRANSISTOR 2SC2603-EF	
IC901	8-759-602-66	IC M5230L-A		Q341	8-729-900-80	TRANSISTOR DTC114ES	
IC902	8-759-604-29	IC M5F7805L		Q342	8-729-900-80	TRANSISTOR DTC114ES	
< TRANSFORMER >				Q351	8-729-900-80	TRANSISTOR DTC114ES	
IFT101	1-404-807-11	TRANSFORMER, DISCRIMINATOR		Q352	8-729-900-80	TRANSISTOR DTC114ES	
IFT102	1-404-713-11	TRANSFORMER, IF		Q361	8-729-801-93	TRANSISTOR 2SD1387-3	
< JACK >				Q362	8-729-620-05	TRANSISTOR 2SC2603-EF	
J301	1-565-259-11	JACK, PIN 4P (AUX/CD)		Q381	8-729-900-80	TRANSISTOR DTC114ES	
J371	1-562-837-21	JACK (MIC)		Q382	8-729-801-93	TRANSISTOR 2SD1387-3	
J701	1-562-837-11	JACK (HEADPHONES)		Q383	8-729-900-80	TRANSISTOR DTC114ES	
< COIL >				Q384	8-729-900-80	TRANSISTOR DTC114ES	
L001	1-406-286-11	COIL (LW OSC)		Q441	8-729-900-80	TRANSISTOR DTC114ES	
L003	1-406-339-11	COIL (OSC, SW3) (AUS/E/EA)		Q442	8-729-900-80	TRANSISTOR DTC114ES	
L004	1-402-424-11	COIL (ANT, SW3) (AUS/E/EA)		Q451	8-729-900-80	TRANSISTOR DTC114ES	
L005	1-410-489-11	INDUCTOR 390uH (AUS/E/EA)		Q452	8-729-900-80	TRANSISTOR DTC114ES	
L006	1-408-399-00	INDUCTOR, MICRO 1.5 5%		Q901	8-729-209-15	TRANSISTOR 2SD2012 (AEP/EE/IT/G)	
				Q901	8-729-920-98	TRANSISTOR 2SD1761-EF (AUS/E/EA)	
				Q902	8-729-111-67	TRANSISTOR 2SB1094-L (AEP/EE/IT/G)	
				Q902	8-729-924-90	TRANSISTOR 2SB1370-EF (AUS/E/EA)	
				Q903	8-729-900-80	TRANSISTOR DTC114ES	

## MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
< RESISTOR >							
R001	1-247-891-00	CARBON	330K 5% 1/4W	R126	1-249-410-11	CARBON	270 5% 1/4W
R002	1-249-411-11	CARBON	330 5% 1/4W	R127	1-249-425-11	CARBON	4.7K 5% 1/4W
R003	1-249-405-11	CARBON	100 5% 1/4W (IT/G)	R128	1-249-425-11	CARBON	4.7K 5% 1/4W
R003	1-249-407-11	CARBON	150 5% 1/4W	R129	1-249-425-11	CARBON	4.7K 5% 1/4W
R004	1-249-429-11	CARBON	10K 5% 1/4W	R130	1-249-405-11	CARBON	100 5% 1/4W
R005	1-249-429-11	CARBON	10K 5% 1/4W	R131	1-249-417-11	CARBON	1K 5% 1/4W
R006	1-249-429-11	CARBON	10K 5% 1/4W (AUS/E/EA)	R132	1-249-418-11	CARBON	1.2K 5% 1/4W
R007	1-249-441-11	CARBON	100K 5% 1/4W	R133	1-249-410-11	CARBON	270 5% 1/4W
R008	1-249-437-11	CARBON	47K 5% 1/4W	R134	1-249-414-11	CARBON	560 5% 1/4W
R009	1-247-903-00	CARBON	1M 5% 1/4W	R135	1-249-421-11	CARBON	2.2K 5% 1/4W
R010	1-249-411-11	CARBON	330 5% 1/4W	R136	1-249-433-11	CARBON	22K 5% 1/4W
R017	1-249-429-11	CARBON	10K 5% 1/4W (AUS/E/EA)	R137	1-249-425-11	CARBON	4.7K 5% 1/4W
R018	1-249-429-11	CARBON	10K 5% 1/4W (AUS/E/EA)	R138	1-249-425-11	CARBON	4.7K 5% 1/4W
R022	1-249-417-11	CARBON	1K 5% 1/4W (AUS/E/EA)	R301	1-249-437-11	CARBON	47K 5% 1/4W
R023	1-249-417-11	CARBON	1K 5% 1/4W (AUS/E/EA)	R302	1-249-422-11	CARBON	2.7K 5% 1/4W
R024	1-249-409-11	CARBON	220 5% 1/4W	R303	1-249-437-11	CARBON	47K 5% 1/4W
R025	1-249-429-11	CARBON	10K 5% 1/4W	R304	1-249-422-11	CARBON	2.7K 5% 1/4W
R026	1-249-429-11	CARBON	10K 5% 1/4W	R304A	1-249-417-11	CARBON	1K 5% 1/4W (AEP/EE)
R027	1-249-429-11	CARBON	10K 5% 1/4W (AUS/E/EA)	R309	1-249-433-11	CARBON	22K 5% 1/4W
R028	1-249-429-11	CARBON	10K 5% 1/4W (AUS/E/EA)	R310	1-249-427-11	CARBON	6.8K 5% 1/4W
R031	1-247-891-00	CARBON	330K 5% 1/4W (IT/G)	R311	1-249-441-11	CARBON	100K 5% 1/4W
R032	1-249-411-11	CARBON	330 5% 1/4W (IT/G)	R312	1-249-430-11	CARBON	12K 5% 1/4W
R101	1-249-417-11	CARBON	1K 5% 1/4W	R313	1-247-870-11	CARBON	43K 5% 1/4W
R102	1-249-432-11	CARBON	18K 5% 1/4W	R314	1-249-425-11	CARBON	4.7K 5% 1/4W
R103	1-249-435-11	CARBON	33K 5% 1/4W (AEP/AUS/E/EE/EA)	R315	1-249-441-11	CARBON	100K 5% 1/4W
R104	1-249-427-11	CARBON	6.8K 5% 1/4W	R316	1-249-441-11	CARBON	100K 5% 1/4W
R105	1-249-430-11	CARBON	12K 5% 1/4W	R317	1-249-417-11	CARBON	1K 5% 1/4W
R106	1-247-848-11	CARBON	5.1K 5% 1/4W	R318	1-249-417-11	CARBON	1K 5% 1/4W
R107	1-249-416-11	CARBON	820 5% 1/4W (AEP/AUS/E/EE/EA)	R319	1-249-409-11	CARBON	220 5% 1/4W
R107	1-249-420-11	CARBON	1.8K 5% 1/4W (IT/G)	R320	1-249-409-11	CARBON	220 5% 1/4W
R108	1-249-437-11	CARBON	47K 5% 1/4W	R321	1-247-903-00	CARBON	1M 5% 1/4W
R109	1-249-425-11	CARBON	4.7K 5% 1/4W	R322	1-249-411-11	CARBON	330 5% 1/4W
R110	1-249-425-11	CARBON	4.7K 5% 1/4W	R323	1-247-882-11	CARBON	130K 5% 1/4W
R111	1-249-423-11	CARBON	3.3K 5% 1/4W	R324	1-249-426-11	CARBON	5.6K 5% 1/4W
R112	1-249-423-11	CARBON	3.3K 5% 1/4W	R325	1-249-433-11	CARBON	22K 5% 1/4W
R113	1-249-441-11	CARBON	100K 5% 1/4W	R326	1-249-433-11	CARBON	22K 5% 1/4W
R114	1-249-429-11	CARBON	10K 5% 1/4W	R327	1-249-431-11	CARBON	15K 5% 1/4W
R115	1-249-422-11	CARBON	2.7K 5% 1/4W	R328	1-249-411-11	CARBON	330 5% 1/4W
R116	1-249-422-11	CARBON	2.7K 5% 1/4W	R329	1-249-425-11	CARBON	4.7K 5% 1/4W
R119	1-249-405-11	CARBON	100 5% 1/4W	R330	1-249-429-11	CARBON	10K 5% 1/4W
R121	1-249-401-11	CARBON	47 5% 1/4W	R331	1-247-903-00	CARBON	1M 5% 1/4W
R122	1-249-414-11	CARBON	560 5% 1/4W	R332	1-249-411-11	CARBON	330 5% 1/4W
R123	1-249-421-11	CARBON	2.2K 5% 1/4W	R333	1-247-882-11	CARBON	130K 5% 1/4W
R124	1-249-423-11	CARBON	3.3K 5% 1/4W	R334	1-249-426-11	CARBON	5.6K 5% 1/4W
R125	1-249-418-11	CARBON	1.2K 5% 1/4W	R335	1-249-429-11	CARBON	10K 5% 1/4W
				R336	1-249-431-11	CARBON	15K 5% 1/4W
				R338	1-249-411-11	CARBON	330 5% 1/4W
				R339	1-249-425-11	CARBON	4.7K 5% 1/4W

## MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R340	1-249-429-11	CARBON	10K 5% 1/4W	R413	1-247-870-11	CARBON	43K 5% 1/4W
R341	1-249-437-11	CARBON	47K 5% 1/4W	R414	1-249-425-11	CARBON	4.7K 5% 1/4W
R342	1-249-429-11	CARBON	10K 5% 1/4W	R421	1-247-903-00	CARBON	1M 5% 1/4W
R343	1-249-433-11	CARBON	22K 5% 1/4W	R422	1-249-411-11	CARBON	330 5% 1/4W
R344	1-249-427-11	CARBON	6.8K 5% 1/4W	R423	1-247-882-11	CARBON	130K 5% 1/4W
R345	1-249-435-11	CARBON	33K 5% 1/4W	R424	1-249-426-11	CARBON	5.6K 5% 1/4W
R347	1-247-870-11	CARBON	43K 5% 1/4W	R425	1-249-433-11	CARBON	22K 5% 1/4W
R348	1-249-441-11	CARBON	100K 5% 1/4W	R426	1-249-433-11	CARBON	22K 5% 1/4W
R349	1-249-429-11	CARBON	10K 5% 1/4W	R427	1-249-431-11	CARBON	15K 5% 1/4W
R350	1-249-435-11	CARBON	33K 5% 1/4W	R431	1-247-903-00	CARBON	1M 5% 1/4W
R351	1-249-419-11	CARBON	1.5K 5% 1/4W	R432	1-249-411-11	CARBON	330 5% 1/4W
R352	1-249-427-11	CARBON	6.8K 5% 1/4W	R433	1-247-882-11	CARBON	130K 5% 1/4W
R353	1-249-416-11	CARBON	820 5% 1/4W	R434	1-249-426-11	CARBON	5.6K 5% 1/4W
R354	1-249-423-11	CARBON	3.3K 5% 1/4W	R435	1-249-429-11	CARBON	10K 5% 1/4W
R355	1-249-435-11	CARBON	33K 5% 1/4W	R436	1-249-431-11	CARBON	15K 5% 1/4W
R356	1-249-435-11	CARBON	33K 5% 1/4W	R441	1-249-437-11	CARBON	47K 5% 1/4W
R357	1-249-441-11	CARBON	100K 5% 1/4W	R442	1-249-429-11	CARBON	10K 5% 1/4W
R358	1-249-430-11	CARBON	12K 5% 1/4W	R443	1-249-433-11	CARBON	22K 5% 1/4W
R361	1-249-423-11	CARBON	3.3K 5% 1/4W	R444	1-249-427-11	CARBON	6.8K 5% 1/4W
R362	1-249-438-11	CARBON	56K 5% 1/4W	R445	1-249-435-11	CARBON	33K 5% 1/4W
R363	1-249-433-11	CARBON	22K 5% 1/4W	R447	1-249-417-11	CARBON	1K 5% 1/4W
R364	1-249-437-11	CARBON	47K 5% 1/4W	R448	1-249-429-11	CARBON	10K 5% 1/4W
R365	1-249-427-11	CARBON	6.8K 5% 1/4W	R449	1-249-409-11	CARBON	220 5% 1/4W
R366	1-249-437-11	CARBON	47K 5% 1/4W	R450	1-249-435-11	CARBON	33K 5% 1/4W
R367	1-249-388-11	CARBON	3.9 5% 1/6W	R451	1-249-419-11	CARBON	1.5K 5% 1/4W
R371	1-249-429-11	CARBON	10K 5% 1/4W	R452	1-249-427-11	CARBON	6.8K 5% 1/4W
R372	1-249-417-11	CARBON	1K 5% 1/4W	R453	1-249-416-11	CARBON	820 5% 1/4W
R373	1-249-418-11	CARBON	1.2K 5% 1/4W	R454	1-249-423-11	CARBON	3.3K 5% 1/4W
R374	1-249-440-11	CARBON	82K 5% 1/4W	R455	1-249-435-11	CARBON	33K 5% 1/4W
R375	1-249-441-11	CARBON	100K 5% 1/4W	R456	1-249-435-11	CARBON	33K 5% 1/4W
R376	1-247-864-11	CARBON	24K 5% 1/4W	R457	1-249-441-11	CARBON	100K 5% 1/4W
R377	1-247-864-11	CARBON	24K 5% 1/4W	R458	1-249-430-11	CARBON	12K 5% 1/4W
R381	1-249-429-11	CARBON	10K 5% 1/4W	R708	1-249-414-11	CARBON	560 5% 1/4W
R382	1-249-421-11	CARBON	2.2K 5% 1/4W	R758	1-249-429-11	CARBON	10K 5% 1/4W
R383	1-249-423-11	CARBON	3.3K 5% 1/4W	R791	1-249-389-11	CARBON	4.7 5% 1/4W (1T/G)
R384	1-249-421-11	CARBON	2.2K 5% 1/4W	R808	1-249-414-11	CARBON	560 5% 1/4W
R385	1-249-429-11	CARBON	10K 5% 1/4W	R891	1-249-389-11	CARBON	4.7 5% 1/4W (1T/G)
R386	1-249-441-11	CARBON	100K 5% 1/4W	R901	△ 1-217-473-00	FUSIBLE	2.2 5% 1W F
R387	1-249-429-11	CARBON	10K 5% 1/4W	R902	△ 1-217-485-00	FUSIBLE	22 5% 1W F
R388	1-249-423-11	CARBON	3.3K 5% 1/4W	R903	1-247-903-00	CARBON	1M 5% 1/4W
R389	△ 1-217-473-00	FUSIBLE	2.2 5% 1W F	R904	1-249-432-11	CARBON	18K 5% 1/4W
R401	1-249-437-11	CARBON	47K 5% 1/4W	R905	1-249-423-11	CARBON	3.3K 5% 1/4W
R402	1-249-422-11	CARBON	2.7K 5% 1/4W	R906	1-249-431-11	CARBON	15K 5% 1/4W
R403	1-249-437-11	CARBON	47K 5% 1/4W	R907	1-249-431-11	CARBON	15K 5% 1/4W
R404	1-249-422-11	CARBON	2.7K 5% 1/4W	R910	1-249-413-11	CARBON	470 5% 1/4W
R409	1-249-433-11	CARBON	22K 5% 1/4W				
R410	1-249-427-11	CARBON	6.8K 5% 1/4W				
R411	1-249-441-11	CARBON	100K 5% 1/4W				
R412	1-249-430-11	CARBON	12K 5% 1/4W				

The components identified by mark  
△ or dotted line with mark △ are  
critical for safety.  
Replace only with part number  
specified.

## MAIN

Ref.No.	Part No.	Description	Remark
< VARIABLE RESISTOR >			
RV101	1-228-995-00	RES. ADJ. METAL22K	
RV102	1-228-995-00	RES. ADJ. METAL22K	
RV321	1-238-732-21	RES. ADJ. CARBON 100	
RV331	1-238-732-21	RES. ADJ. CARBON 100	
RV341	1-238-017-11	RES. ADJ. CARBON 22K	
RV361	1-238-019-11	RES. ADJ. CARBON 47K	
RV421	1-238-732-21	RES. ADJ. CARBON 100	
RV431	1-238-732-21	RES. ADJ. CARBON 100	
RV441	1-238-017-11	RES. ADJ. CARBON 22K	
RV461	1-238-019-11	RES. ADJ. CARBON 47K	
< RELAY >			
RY301	1-515-614-21	RELAY	
< SWITCH >			
S361	1-554-798-31	SWITCH, SLIDE (ISS)	
< TRANSFORMER >			
T361	1-433-347-11	TRANSFORMER, BIAS OSCILLATION	
T901	△ 1-449-544-11	TRANSFORMER, POWER (E/AUS/EA)	
T901	△ 1-449-618-11	TRANSFORMER, POWER (AEP/EE/IT/G)	
< TERMINAL >			
TB001	1-536-707-00	TERMINAL BOARD, PUSH 2P (ANTENNA) (IT/G)	
TB001	1-536-708-00	TERMINAL BOARD, PUSH 4P (ANTENNA) (AEP/AUS/E/EE/EA)	
TB002	1-563-199-21	CONNECTOR, PAL	
TB101	* 4-925-530-01	PLATE, GROUND	
TB701	1-536-705-00	TERMINAL BOARD (SP) (SPEAKER)	
TP101	* 1-560-060-00	PIN, CONNECTOR 2P	
TP301	* 1-560-061-00	PIN, CONNECTOR 3P	
< CRYSTAL >			
X101	1-577-075-11	OSCILLATOR, CERAMIC (19kHz)	

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## MISCELLANEOUS

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18	△ 1-551-188-XX	CORD, POWER (E)
18	△ 1-555-750-00	CORD, POWER (AEP/EE/EA/IT/G)
18	△ 1-559-912-11	CORD, POWER (AUS)
68	1-631-562-11	A BOARD (DECK B)
68	1-631-563-11	B BOARD (DECK A)

Ref.No.	Part No.	Description	Remark
ANT1	1-501-270-00	ANTENNA, TELESCOPIC	
F901	△ 1-532-215-00	FUSE (0.8A) (E/AUS/EA)	
F902	△ 1-532-215-00	FUSE (0.8A)	
HE301	1-543-261-11	HEAD, ERASE (886-01-24) (DECK B)	
HP301	1-543-424-21	HEAD, MAGNETIC (PB) (DECK A)	
HRP301	1-543-424-21	HEAD, MAGNETIC (REC/PB) (DECK B)	
S1001	1-571-036-11	SWITCH, LEAF (DETECTION SW) (Cr02) (DECK A)	
S1002	1-570-430-11	SWITCH, LEAF (PLAY) (DECK A)	
S1003	1-570-715-11	SWITCH, LEAF (MOTOR) (DECK A)	
S1004	1-571-036-11	SWITCH, LEAF (DETECTION SW) (Cr02) (DECK B)	
S1005	1-570-430-11	SWITCH, LEAF (PLAY) (DECK B)	
S1006	1-571-714-11	SWITCH, LEAF (REC) (DECK B)	
S1007	1-570-715-11	SWITCH, LEAF (MOTOR) (DECK B)	
T901	△ 1-449-544-11	TRANSFORMER, POWER (E/AUS/EA)	
T901	△ 1-449-618-11	TRANSFORMER, POWER (AEP/EE/IT/G)	

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## ACCESSORY &amp; PACKING MATERIAL

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1-465-249-11	REMOTE COMMANDER (RM-S190)
△ 1-569-007-11	ADAPTER, CONVERSION 2P (E)
△ 1-569-008-11	ADAPTER, CONVERSION 2P (AUS/EA)
2-181-754-01	COVER, BATTERY (for RM-S190)
3-694-922-01	SHEET, PROTECTION
3-752-778-11	MANUAL, INSTRUCTION (AEP/E/AUS/EA) (ENGLISH/FRENCH/SPANISH/CHINESE)
3-752-778-41	MANUAL, INSTRUCTION (AEP/IT/G) (GERMAN/DUTCH/SWEDISH/ITALIAN/PORTUGUESE)
3-752-778-51	MANUAL, INSTRUCTION (EE) (ENGLISH/GERMAN/POLISH/RUSSIAN)
* 4-942-340-01	CUSHION
* 4-942-341-01	INDIVIDUAL CARTON (FH-411R) (E/EA)
* 4-942-344-01	INDIVIDUAL CARTON (FH-411R) (AEP/EE/AUS/G)

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## HARDWARE LIST

\*\*\*\*\*

#1	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S
#2	7-682-547-04	SCREW +BVTT 3X6 (S)
#3	7-682-548-04	SCREW +BVTT 3X8 (S)
#4	7-682-547-09	SCREW +B 3X6
#5	7-682-550-09	SCREW +B 3X12
#6	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3
#7	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S
#8	7-628-253-90	SCREW +PS 2.6X4
#9	7-685-133-19	SCREW +P 2.6X6 TYPE1
#10	7-624-106-04	STOP RING 3.0, TYPE -E
#11	7-621-255-55	SCREW, TOTSU P 2X8
#12	7-621-255-15	SCREW +P 2X3
#13	7-685-782-01	SCREW +PTT 2X5 (S) (DECK B)

The components identified by mark  
△ or dotted line with mark △ are  
critical for safety.  
Replace only with part number  
specified.

Sony Corporation  
Audio Group

English  
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# HST-H411

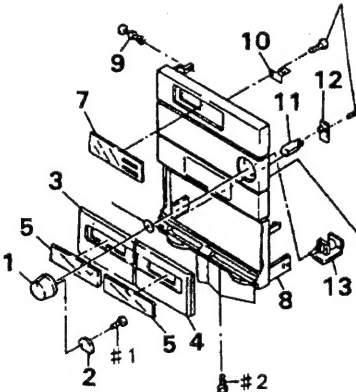
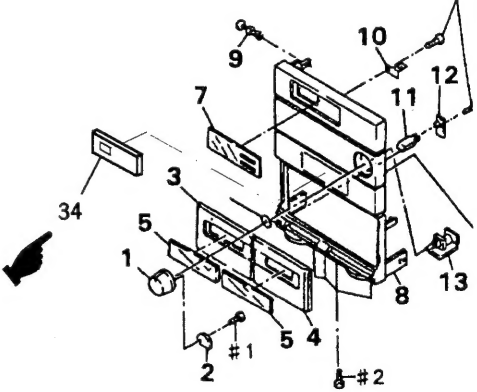
## SONY SERVICE MANUAL

AEP Model  
E Model  
Saudi Arabia Model  
Australian Model

### CORRECTION-1

Correct your service manual as shown below.

 : indicates corrected portion.

Page	INCORRECT			CORRECT		
	<u>No.</u>	<u>Part No.</u>	<u>Description</u>	<u>No.</u>	<u>Part No.</u>	<u>Description</u>
	—	—	—	34	4-928-659-51	PLATE(SAT) ,ORNAMENTAL (E,Saudi Arabia,Australian)
	—	—	—	34	4-928-659-61	PLATE(SAT) ,ORNAMENTAL (AEP,German,Italian,East European)
23						

# SS-H311/H313/H414-2

## SERVICE MANUAL REVISED

Discard SS-H311/H313/H414-2 Service Manual  
(No. 9-956-134-11, 9-956-134-12) previously  
issued. This Service Manual contains it.

### SPECIFICATIONS

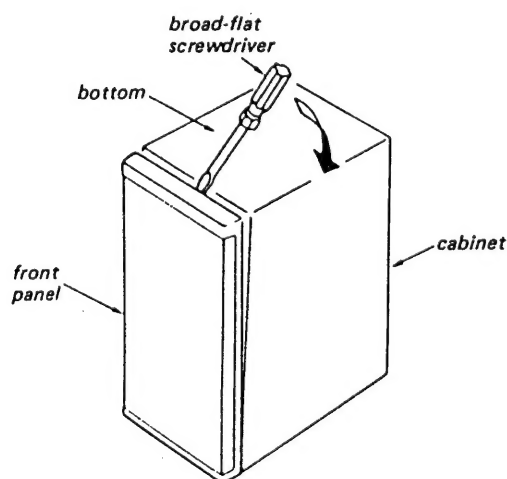
Speaker system	2 way 2 speaker system
Speaker units	Woofer: 14 cm dia., cone type Tweeter: 5 cm dia., cone type
Enclosure type	Bass reflex
Frequency range	70 Hz - 20 kHz
Sensitivity	88 dB/W/m
Impedance	6 ohms
Dimensions	Approx. 185 × 270 × 220 mm (w/h/d) (7 1/4 × 10 5/8 × 8 3/4 inches)
Weight	Approx. 2.9 kg (6 lb 6 oz) net per speaker



*Canadian Model*  
SS-H414-2  
*AEP Model*  
*Australian Model*  
SS-H414-2  
SS-H311  
*E Model*  
SS-H311/H313/H414-2

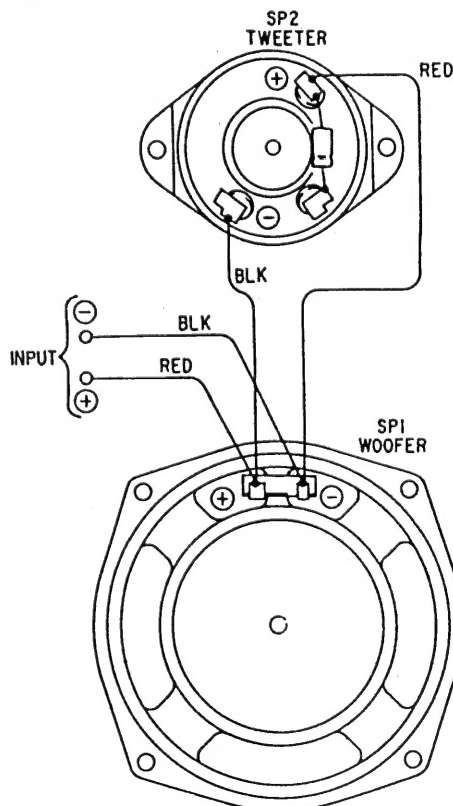
- SS-H311 is the speaker system in FH-311.
- SS-H313 is the speaker system in FH-313R II.
- SS-H414-2 is the speaker system in FH-313R II and FH-414 II.

### 1. FRONT PANEL REMOVAL



Note: Be careful not to scratch the cabinet.

### 2. WIRING DIAGRAM

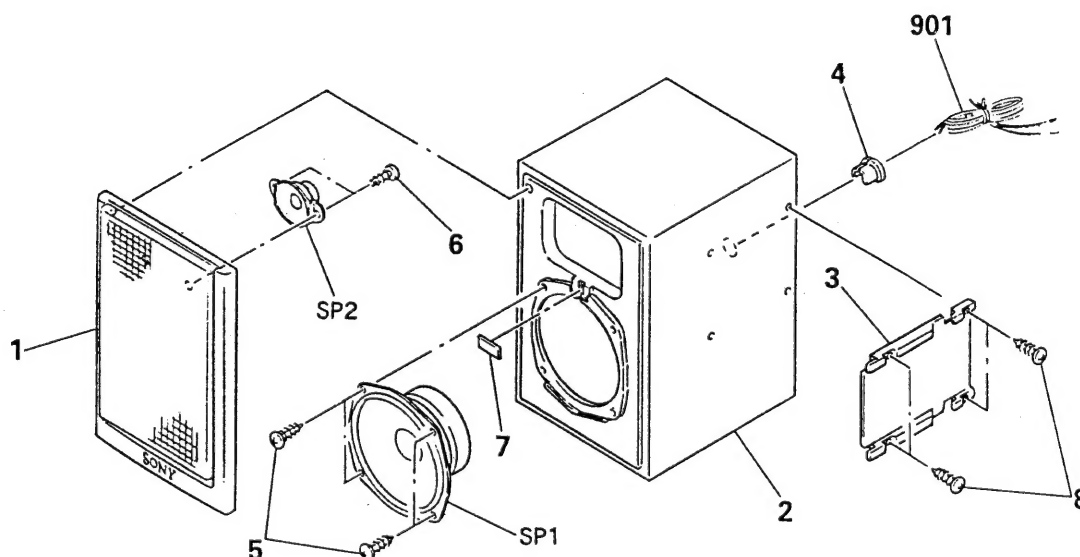


SPEAKER SYSTEM  
**SONY**®

## 3. EXPLODED VIEW AND PARTS LIST

## NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.



No.	Part No.	Description
1	X-4941-135-2 X-4929-625-1	(H311).... PANEL ASSY, FRONT (H313/H414-2).... PANEL ASSY, FRONT
2	X-4943-030-1 X-4943-031-1 X-4929-626-1	(H311).... CABINET ASSY (L), SPEAKER (H311).... CABINET ASSY (R), SPEAKER (H313/H414-2).... CABINET ASSY, SPEAKER
3	4-942-780-01 4-929-606-01	(H311).....PANEL, SIDE (H313/H414-2)....PANEL, SIDE
4	4-870-003-00	CLIPPER, CORD
5	4-874-614-11	SCREW (4) (3.5X14), TAPPING
6	7-685-646-79	SCREW +BVTP 3X8 TYPE2 SLIT
7	9-911-844-XX	PACKING
8	4-874-614-61	SCREW (4) (3.5X16), TAPPING

No.	Part No.	Description
901	1-575-228-11	CORD, SPEAKER
SP1	1-544-237-11	SPEAKER (WOOFER)
SP2	1-544-236-11	SPEAKER (TWEETER)

## ACCESSORY &amp; PACKING MATERIAL

*4-857-137-01	(H313/H414-2)....	CUSHION
4-920-151-01	(H313/H414-2)....	SHEET, PROTECTION